

# AMATEUR RADIO

MAY 1962

JG/EH



VICTORIA

TELEPHONE:  
RE 6611, 26 LINES  
REGN. NO.

PREMIER'S DEPARTMENT  
MELBOURNE, C.2

22nd January, 1962

Dear Sirs,

Now that the danger seems to have passed, may I convey to you the sincere appreciation of the Government for the part played by your organization in the recent bush fires.

I understand from the Chief Fire Officer of the Country Fire Authority that the radio equipment you so readily offered was of great assistance to him, and that the efforts of your operators contributed in no small measure to the vital task of covering the area with communications.

I would be glad if you would accept my personal grateful thanks for your public spirited action in this emergency, and if you would convey to all concerned the sincere appreciation of the Government for the part they played in this disaster.

Yours faithfully,

A.G.B. Walsh  
Deputy Premier.

The Secretary,  
Wireless Institute of Australia  
(Victorian Division)  
478 Victoria Parade,  
EAST MELBOURNE

Vol. 30, No. 5



2/-

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6B7	10/-	80	10/-
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6BE6	12/6	807	7/6 3 a £1
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6C5	5/- 5 a £1	809	20/-
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6D6	5/- 5 a £1	832A	19/6
6E5	5/- 5 a £1	866	32/6
6F5	7/6	954	5/- 5 a £1
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6F7	10/-	956	5/- 5 a £1
6F8	5/-	958A	2/6 10 a £1
6G6	7/6 3 a £1	2051	5/-
6G8G	17/6	9003	7/6 3 a £1
6H6	Glass 2/6	AV11	2/11
6H6	Metal 3/6	DL75	2/6 10 a £1
6J6	10/-	EAS0	2/- 10 a £1
6K7	5/- 5 a £1	EC91/6AQ4	10/-
6K8G	20/-	EF36	5/- 5 a £1
6K8GT	12/6	EF39	5/- 5 a £1
6L7	5/- 5 a £1	EF70	5/- 5 a £1
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RL18	7/6 3 a £1	VT52	5/-
TT15 (CV415) 5/-	-	VT127	4/11 5 a £1
UL41	7/6 3 a £1	VT501	7/6 3 a £1
VR53	5/- 5 a £1	VR101	5/- 5 a £1
VR101	5/- 5 a £1	Y65	5/-

# "AMATEUR RADIO"

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## OUR COVER

At 6 p.m. on 14th January, 1962, the Victorian Country Fire Authority requested the W.I.A. to provide a communication link from Mt. Dandenong to Melbourne (about 25 miles); by 8 p.m. this link was operating and providing valuable service during the disastrous bush fires which were sweeping the area. Two metre f.m. mobile car phone sets on 145.8 Mc. were used, due to a variety of circumstances.

Regrettably, due to space limitations, the full story is not told.

The known Amateurs who took part in this vital community service were: VK3s, ZCB, ZCZ, ZEO, ZBW, CS, BX, QU, ADW, ZCO, ZYI, ZIC, ZBF, ZFZ, ZHT, OF, ZW, ZGP, ZJC, YS, QO, DF, ZGO, ZGM, ZBJ, ZKK, ZDK, ZGH, ZEC, ZDE, ZIR, ARZ, ZFP, ZGW, YA, and ZU.

Our cover is a replica of the official tribute to the Amateur Service, which gave unsparingly in long hours of duty, a true example of community service.

We are no longer "Hams".

## COMMENT



## THE GROWTH OF AN ORGANISATION

By the time this issue of the magazine is printed, the 26th Annual Convention will have come and gone, and the Federal Councillors returned to their respective Divisions to report the results of discussions. Although the work of the Convention will have been strenuous and time-consuming with more than 60 items to discuss, the real work is that arising from the Convention —work for the Executive to carry out the wishes of the Council and work for the Councillors in implementing the various decisions. Two items of great importance on the agenda deal with differing proposals for a new Federal Constitution.

One of these is based on a Federal Company of which the Divisional Companies or unincorporated associations may become members, and the other is in essence a Federal body to which individuals may subscribe as members but for administrative purposes be organised into Divisions, as at present. We cannot predict as this early stage which of these two alternatives will be accepted by the Federal Council; but whatever the outcome, the decision will only be made after due and careful consideration and in accordance with the wishes of the majority of the Divisions.

The Institute has maintained an unspectacular, though steady, growth over the years, but recent events in various spheres of our activities point to the fact that the present Institute organisation is about to emerge from its adolescence into adulthood. Constitutionally, the Institute on a Federal plane has been weak, but the findings of this Convention on the two items aforesaid, could well set the pattern for a stronger Federal body which is capable of expansion and at the same time lay the foundation on which our administrative successors may build a solid structure.

Our keyword should be progress, and you, the member, must make every effort possible and within your particular abilities to assist in the growth of our organisation. You can do this in many ways—come regularly to your Divisional meetings, volunteer to help when required and, most important of all, air your opinions to your Council. If you determine to do even these few things, then our Institute will not look back but should continue to grow into a mature organisation of which we may be justly proud.

FEDERAL EXECUTIVE, W.I.A.

## CONTENTS

Inductance, Capacitance, and Resonance	3
For Beginners: A 2-Valve Superhet, with Bandspread and B.f.o.	4
Multiband Folded Dipole	5
For 288 Mc. Enthusiasts	7
Hints and Kinks:	
Tuning a Mobile Whip	7
Cheap Metal Cases	7
Cathode Ray Tube Characteristics	9
Ross Hull Memorial V.h.f. Contest 1961-62 Results	9
The Oscar II. Project	7
Radio Aurora Incidence	7
Emergency Services and S.s.b.	11
Official Opening of New H.Q. Building for N.S.W. Division, W.I.A.	8
V.H.F.C.C.	8
E.D.R. Jubilee Contest	7
R.D. Contest Results—Amendment	7
Federal and Divisional Monthly News Reports	17
Correspondence	11
DX	13
Sideband	15
SWL	16
VHF	12

# HALICRAFTERS



## MODEL HT-37 TRANSMITTER

Hallicrafters new HT-37 employs a carefully designed phasing type sideband generator developed by the famous team which produced the HT-32A. At signal frequency all tubes, most components and voltages are equal to the HT-32A. The wealth of production and engineering skills which has made the HT-32A the most wanted transmitter now provides you the best in a phasing unit at a moderate price. The HT-37 is a complete table top, high efficiency Amateur band transmitter providing s.s.b., a.m. or c.w. output on 80, 40, 20, 15 and 10 metres.

### FEATURES

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- ★ Five-band output (80, 40, 20, 15, and 10 metres).
- ★ All modes of transmission—c.w., a.m., and s.s.b.
- ★ Unwanted sideband down 40 db. at 1 Ke.
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- ★ Both sidebands transmitted on a.m.
- ★ Precision v.f.o.
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- ★ 52 ohm pi network output for harmonic suppression.

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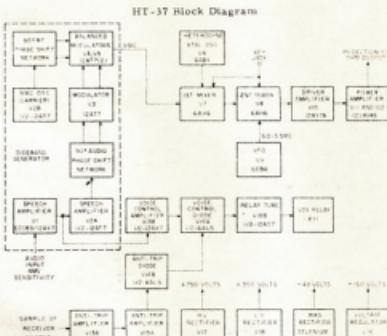
- Operation: Power off, standby, Mox, Cal., Vox.
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- Carrier balance.
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#### Rear Chassis:

- Co-ax antenna connector.
- Line fuse.
- Control connector.
- A.c. power line cord.

# INDUCTANCE, CAPACITANCE, & RESONANCE

## AN "A.R." DATA SHEET

The following provides a collection of useful information regarding capacitance, inductance, resonance, and tank circuit design. In addition, data is provided regarding air wound coils.

### TANK CIRCUIT CAPACITANCE

The required tank circuit capacitance in any transmitter is:

$$C = \frac{3600 L_p}{f E_{pc}} \quad \dots \dots \dots (1)$$

where  $C$  = total circuit capacity in pF.

$L_p$  = total plate current of the

value(s) in mA.

$f$  = frequency in Mc.

$E_{pc}$  = plate to cathode voltage in volts.

(for a coil Q of 12)

### L AND C REQUIRED

The combination of inductance and capacity required for resonance in the main Amateur Service frequency bands is as follows; this is based upon the relationship—

$$LC = \frac{25330}{f^2} \quad \dots \dots \dots (2)$$

Amateur Service Frequency	LC Product in $\mu\text{H}$ . & pF.
80 metres (3.5 Mc.)	2065
40 metres (7 Mc.)	517
20 metres (14 Mc.)	129
15 metres (21 Mc.)	57.4
11 metres (27 Mc.)	34.7
10 metres (29 Mc.)	30

Table 1.

Thus from equation 1 and equation 2, the required inductance and capacity for any Amateur band can be calculated.

Note that capacity refers to the total circuit capacity, and the required variable capacity will be less by the amount of capacity (i.e. the "strays") inherent in the circuit.

E.g.: A 10 pF. condenser would require an inductance of 206.5  $\mu\text{H}$ . to resonate at 3.5 Mc. ( $10 \times 206.5 = 2065$ , see Table 1). A coil of 5  $\mu\text{H}$ . would require a tuning capacitance of 6 pF. for resonance in the 10 metre band ( $5 \times 6 = 30$ ).

### WIRE GAUGE

In designing tank circuit inductances it must be remembered that the circulating current in the final tank will be  $Q I_p$ , where  $Q$  is the quality factor ( $wL/R$ ) and  $I_p$  is the measured plate current. Therefore the gauge of wire used in the plate circuit inductance must be heavier than required solely to carry the plate current normally considered flowing in the circuit.

Table 2 takes all factors into account and suggests wire sizes which are adequate for conventional design.

Frequency of Circuit	DC Power Input	Wire Gauge SWG
Up to 3.5 Mc.	300 watts	16
3.5 to 7 Mc.		14
7 to 14 Mc.	"	14
14 to 21 Mc.	"	12
21 to 28 Mc.	"	10
Up to 3.5 Mc.	150 watts	18
3.5 to 7 Mc.	watts	16
7 to 14 Mc.	"	16
14 to 21 Mc.	"	14
21 to 28 Mc.	"	12
Up to 3.5 Mc.	75 watts	24
3.5 to 7 Mc.	watts	22
7 to 14 Mc.	or	20
14 to 21 Mc.	less	18
21 to 28 Mc.	"	16

Table 2.

### CONDENSER SPACING

In a plate modulated final p.a. the condenser must be able to withstand the applied d.c. plate voltage plus the modulation signal, thus the peak plate voltage rating required is about twice the applied d.c. plate voltage.

In Table 3 are suggested spacings for final plate circuit condensers. All shafts should be bonded direct to earth by a flexible lead to prevent any possibility of the operator being electrocuted in the event of a breakdown in insulation, or in the case of condenser being above earth, use an insulated coupling.

Applied DC Plate Voltage	Suggested Plate Condenser Spacing
2000 volts	0.150 inches
1000 "	0.05 "
750 "	0.03 "
500 "	0.015 "

Table 3.

### CAPACITY VARIATION

In any circuit, the required capacity variation ( $\Delta C$ ) to tune from a high frequency ( $f_h$ ) to a lower frequency ( $f_l$ ), both measured in Mc., is given by the following equation:

$$\Delta C = C [1 - (f_l + f_h)^2] \quad \dots \dots \dots (3)$$

where  $C$  = total circuit capacity in pF.

### INDUCTANCE

The inductance of an air wound solenoid can be calculated from its dimensions, and for optimum Q ( $wL/R$ ) the ratio of length to diameter should be about twice.

$$L (\mu\text{H.}) = \frac{a^2 N^2}{9a + 10b}$$

$$\text{or } \frac{0.2 a^2 N^2}{3a + 9b + 10c} \quad \dots \dots \dots (4)$$

where  $a$  = coil diameter in inches.

$b$  = coil length in inches.

$c$  = wire diameter in inches.

$N$  = number of turns.

Thus  $N/b$  gives the winding pitch in turns per inch.

Table 4 gives the details of coils made by various manufacturers, and may prove useful in designing a suitable coil. The information has been collated from current details supplied by the makers.

Manufacturer's No.	Reference	Len-Turns				L
		1	2	3	Dist. in. Dia. in. Gauge $\mu\text{H.}$	
3001	604T	2%	2	4	18	0.4
3001	606T	406T	1-08	*	6	18
3002	606T	406T	1-08	*	8	18
3003	610T	410T	1-16	*	10	18
3003	610T	410T	1-16	*	10	20
3004	632T	432T	1-16	*	12	12.7
3005	504T	304T	1%	2	4	16
3005	505T	305T	1%	2	6	18
3006	505T	305T	2-08	*	8	18
3007	510T	310T	1-16	*	10	18
3007	510T	310T	2-16	*	16	20
3008	532T	332T	3-16	*	32	24
3009	604T	404T	1%	13	4	16
3009	605T	405T	1%	13	6	18
3010	605T	405T	3-08	*	8	18
3011	610T	410T	3-16	*	10	18
3012	632T	432T	3-16	*	32	24
3013	804T	604T	1	3	4	16
3014	806T	606T	4-08	*	8	18
3015	810T	610T	4-16	*	10	18
3016	810T	610T	5-16	*	16	20
3017	1004T	804T	1%	10	4	14
3018	1005T	805T	5-08	*	8	18
3019	1010T	810T	5-16	*	10	18
3020	1015	815T	5-16	*	16	18
	1204T	1004T	1%	10	4	14
	1206T	1006T	1%	10	6	14
	1208T	1008T	1%	10	8	14
	1210T	1010T	1%	10	10	14
	1212T	1012T	1%	10	12	14
	1214T	1014T	1%	10	16	20
3021	1404T	1204T	1%	14	4	14
3022	1405T	1205T	1%	14	6	14
3023	1410T	1210T	1%	16	8	12
3024	1405T	1205T	2	10	8	20
	1604T	1404T	2%	10	4	12
	1606T	1406T	2%	10	6	12
	1608T	1408T	2%	10	8	12
3905-1	1610T	1410T	2%	10	10	16
3907-1	1612T	1412T	2%	10	12	16
	2004T	1804T	2%	10	4	12
3905-2	2006T	1806T	2%	10	6	12
3906-1	2008T	1808T	2%	10	8	14
	2010T	1810T	2%	10	10	16
	2404T	2004T	3	10	4	10
	2406T	2006T	3	10	6	12
	2408T	2008T	3	10	8	14
	2410T	2010T	3	10	10	14

Reference 1—Barker and Williamson, U.S.A.

Reference 2—Illumitronic Engineering, of U.S.A. It will be noted that the first two figures of the manufacturer's number state the coil diameter in eighth inches, and the last two figures give the winding pitch in turns per inch. Add an "a" suffix to all three-figure coil numbers; thus 010604T gives a coil 6/8 (15/16") diam. x 4 tpi. The trade name is "Air Dux".

Reference 3—William Pitt, Ltd., 428 Elizabeth St., Melbourne.

Note.—The gauge refers to B. & S. and corrections should be made if S.W.G. wire is used.

\* Length 3 inches only for "Willis" coils.

† Length 2 inches only for "Air Dux" coils.

‡ 20 gauge for "Air Dux" coils.

§ Length 10 inches for "Air Dux" coils.

Table 4.

FOR BEGINNERS:

# A 2-VALVE SUPERHET. WITH BANDSPREAD & B.F.O.

Construction Hints and Alignment Data by A. F. W. Haddrell\*

THIS set is designed for a.m. and c.w. reception using multigrid valves, one a pentagrid converter (6K8) and the other a double triode (6SN7). The intermediate frequency is approx. 1600 Kc. A double triode (6SN7) performs the functions of regenerative detector and audio amplifier.

L2 is the aerial coupling coil and the r.f. circuit (L1-C1) is tuned to the signal frequency. C7 is a by-pass across the 1.5v. battery, used to bias the grid of the 6K8 and one half of the 6SN7 used as an audio amplifier.

The local oscillator circuit is formed by L3, C3 and C4. Condenser C3 is for band setting with C4 for bandspread.

The i.f. tuned circuit (or regenerative detector circuit) is L5 C5. (This needs to be a high C circuit to obtain good stability). L6 is the tickler coil for regeneration. (If L5 is wound to specification, it will be tuned to approx. 1600 Kc.) C2 is the regeneration control.

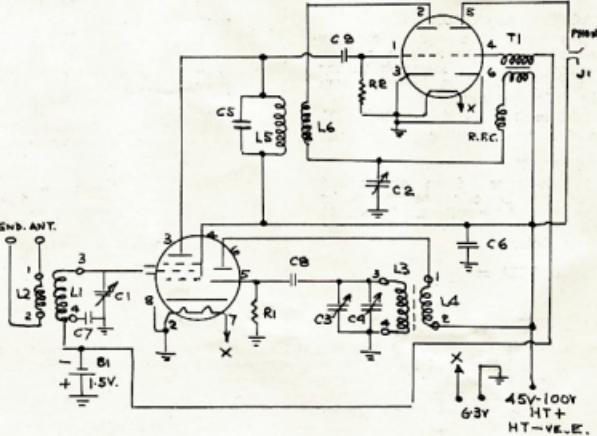
The second section of the 6SN7 is transformer coupled to the detector.

Looking on top of the chassis layout, from the front, the r.f. or input circuit is at left, with C1 below chassis. L1 and L2 are just behind it, and the 6K8 is to the rear of the coil. The oscillator padding condenser C3 is in the centre underneath the chassis and adjacent to the socket for L3-L4, with the 6SN7 to the chassis rear. At right, underneath the audio transformer T1, is the regeneration control C2. The bandspread condenser C4 is mounted on the front panel about 4" up from lower edge and a pair of terminals at the

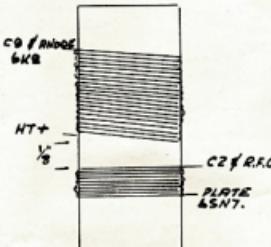
(Continued on opposite page)

\* 13 Reid St., South Morang, Vic.

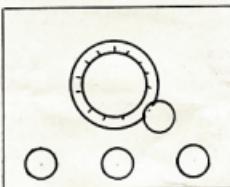
GND. ANT.



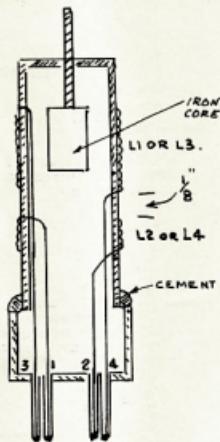
I.F. COIL



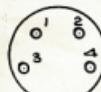
PANEL FRONT VIEW



R.F. & OSC. COIL ARRANGEMENT



COIL LEADS TO BE DRESSED CLOSE TO SIDES OF FORMER.



VIEW UNDER COIL BASE

C1, C2, C3—140 pF. (ex Ham Radio).

C4—240 pF.

C5—0.01 pF.

C7—0.0047 pF.

C8, C9—100 pF.

R1—47K, ½W.

R2—1 megohm, ½W.

L1, L2, L3, L4—¾" diam. See Coil Table.

L5—52 turns No. 30 en. close wound, ¾" diam.

former.

L6—18 turns No. 30 en. close wound, same

form as L5.

B1—1.5 volt cell.

J1—Open jack.

RFC—2.5 MH. r.f. choke.

T1—Audio inter-valve transformer.

COIL TABLE  
For L1 or L3

Coil A—90 turns of No. 30 enamel, close wound.

.. B—65 turns of No. 26 enamel, close wound.

.. C—45 turns of No. 22 enamel, close wound.

.. D—24 turns of No. 22 enamel, spaced ¼".

.. E—20 turns of No. 22 enamel, spaced 1⅓".

COIL TABLE  
For L2 or L4

Coil A—20 turns of No. 30 enamel, close wound.

.. B—15 turns of No. 26 enamel, close wound.

.. C—15 turns of No. 26 enamel, close wound.

.. D—15 turns of No. 26 enamel, close wound.

.. E—20 turns of No. 26 enamel, close wound.

FREQUENCY RANGE

1700—3200 Kc. Coll A Coll B

3000—5700 Kc. Coll C Coll D

5400—10000 Kc. Coll C Coll E

9500—14500 Kc. Coll D Coll E

side of the chassis are used for aerial and earth connections with a jack at the rear for headphones. No power supply is shown on the chassis, but 6v. for heaters and 45v.-100v. are required.

The chassis size for the set is 7" x 7" x 2" and the front panel is 9" x 9" in size.

The i.f. coil is constructed on a 3" diameter former with no core (see sketch).

The r.f. coils are constructed on 3" diameter formers (with iron cores) cemented to standard 4-pin plugs (see sketch).

Around the four-pin socket for the coils a screen from an old 1½" i.f. transformer should be fitted.

#### ADJUSTMENTS

To test the receiver, apply power, and first try out the i.f. circuit. Put a coil in the h.f. socket only and both valves in their sockets and advance C2 from minimum capacity, when a soft hiss should be heard, indicating oscillation. If this occurs before approx. half capacity, remove turns from L6, but if a hiss is not heard add turns, after reversing connections to L6. It is not advisable to have oscillation commencing before mid-capacity.

Plug in an oscillator and r.f. coil for a band on which signals are likely to be heard. (Note coils are arranged so that only a minimum number are required, i.e. some coils are used on two bands.) Say coils C and D are inserted,

set C1 at mid-scale and turn C3 slowly around mid-scale until a signal is heard, then tune C1 for maximum strength. On lower frequency ranges, when it is possible to find two tuning spots on C1, the lower frequency peak is the correct one. The coils are so arranged that the local oscillator frequency is 1600 Kc. higher on the three lower ranges, and lower on the high range than the incoming signal frequency. (This circuit originally appeared in

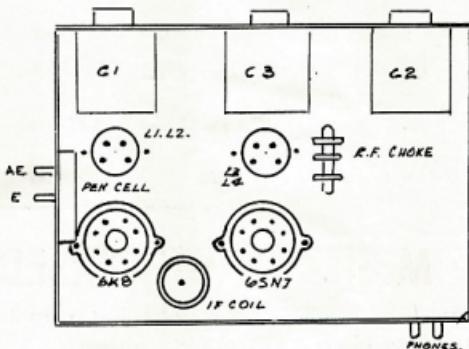
"QST" in 1942—Ed.) Iron cores are used to adjust this requirement.

The regeneration control can be set for maximum sensitivity whilst tuning, and the bandspread control is set for fine tuning.

The power drain is of the order of 10 mA. (more modern valves such as 6UB, etc., could probably be tried to advantage).

If any points are not clear, a s.a.e. to the writer will bring a reply.

#### UNDER CHASSIS VIEW



## MULTIBAND FOLDED DIPOLE

R. E. W. MAY,\* VK1PM

As the sunspot cycle approaches its minimum level and our lower frequency Amateur bands become more useful, the problem for many of us is, how to fit the longer length of wire needed for the usual half-wave dipole into the available space. For instance, the normal 80 metre dipole requires about 134 feet between supports.

One simple and successful multiband antenna is the so-called "100 Foot Flat-Top," centre fed with open wire twin lead. A more recent version, known as the G5RV Multiband Antenna

("A.R.", Jan. 1961) uses co-axial transmission line.

The standard half-wave folded dipole is well known for the excellent match presented for 300 ohms line over a wide band of frequencies. However, this antenna normally will not work on even harmonics, that is, if it is cut for the 80 metre band it is not available on the 40, 20 or 10 metre bands, as a folded dipole.

The multiband folded dipole now described, may be regarded as a "cross" between the "100 Foot Flat-Top" and the half-wave folded dipole. It carries the advantages of both these types, plus an extra advantage of its own.

Firstly, it has the wide band properties of the folded dipole. It will operate efficiently on all bands above the fundamental with a small s.w.r. on the line for each band. It may be fed with open wire line, 300 ohm ribbon, or, in G5RV style, with co-axial line (34 feet of open wire line, or 29 feet of 300 ohm ribbon connected from antenna, to any length of 72 ohm co-axial line). It requires only 80 to 100 feet between supports, for 80 metre operation and above.

Fig. 1 shows the basic design for the antenna, for operation on 80, 40, 20, 15 and 10 metres.

Although the antenna is shown as 100 feet in length, the radiation from about 10 feet at each end tends to cancel on the lower frequency bands. Therefore, up to 10 feet, or even more, may be turned down at each end without appreciable decrease in effective radiating height, so that the antenna may be strung between supports about 80 feet apart.

The radiating section may be made of ribbon, or of open wire as shown in Fig. 2. The resistive point on the open wire feed line occurs at 34 feet from the antenna, but for practical purposes, any length of transmission line may be used, as the s.w.r. is small on any band.

This antenna (Fig. 2) was the only one used by the writer, operating on the 80, 40, 20 and 15 metre bands, in the recent Remembrance Day contest.

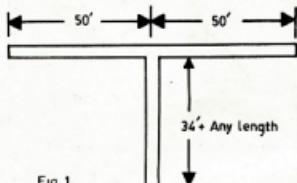


Fig. 1—Multiband Folded Dipole, 80 to 10 mhz bands. Dimensions not critical. 300 ohm ribbon may be used without regard for velocity factor.

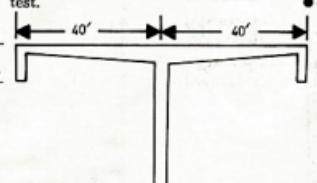


Fig. 2—Open Wire construction for restricted space. Spacing between top and bottom antenna elements at centre of antenna, allows for about 2' feet of clearance when suspended at each end only. Spacing of feed line and turned-down end sections is as for normal open wire transmission line.

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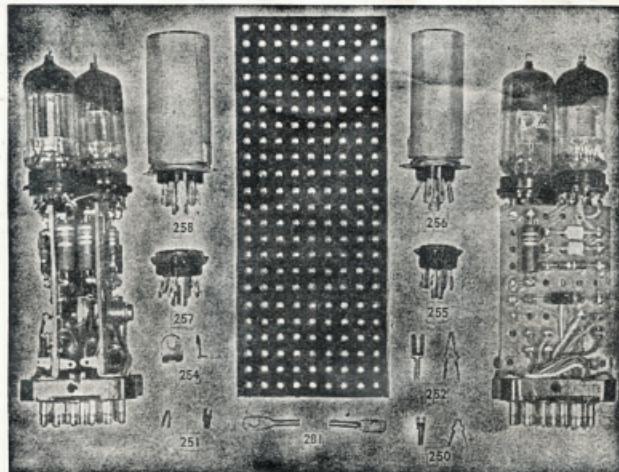
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# FOR 288 Mc. ENTHUSIASTS\*

R. G. ROPER, VK5PLU

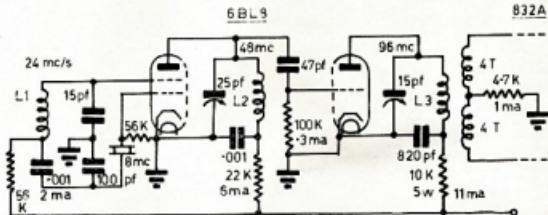
One tube (6BL8), output on 96 Mc., sufficient to drive an 832A tripler to 288 Mc., which will drive another as a final amplifier.

The circuit is not original, being an adaptation of the Jones' harmonic oscillator. However, particular attention has been paid to circuit parameters to enable disposals crystals (not special overtone cuts) to be used.

\* Reprinted from S.A. Division, W.I.A., Bulletin.

To make full use of the output available from the triode section doubler, inductive coupling is used, the grid coil of the 832A multiplier being dipped (with g.d.o.) to self resonance with the tube's input capacity.

With sluggish crystals, decreasing the value of the capacitor C1 will increase the feedback. However, to minimise spurious oscillations, this value should be as large as possible, consistent with reliable starting.



## THE OSCAR II. PROJECT

It is hoped that Oscar II. will be launched in the late April, and the only differences between Oscar I. and Oscar II. are in the telemetering circuits. New data acquisition methods based upon measurements of doppler shift will enable you to compute all orbital parameters.

High gain beams become unnecessary as simple three or four element beams will suffice, even to a ground plane type. A simple type is shown in "QST" for March 1962. The launching time of Oscar II. cannot be given until the parent vehicle is in orbit. The same path will be used for orbit, North to South. So set your beams either to the North or South, and there is no need to move them at all; unless of course you are set up to really track Oscar from start to finish.

A simple converter will pick up Oscar just as well as the more elaborate ones. Remember that any reports are very important even to the simplest, providing you use the proper report forms. No reports will be used unless they are on the report forms.

I have written to all States and have sent a sample copy of the correct Oscar II. report forms. Now if these look too complicated, don't worry as there is a space there even for a strength report only, providing you give it in db. This is quite simple, for example, first check the reading on your S meter on noise. Say the noise is S3 for instance. Now when you hear Oscar come in, and say the S reading is S6 (assuming that the S unit equals 6 db.), then the report will be 18 db, and you enter this in signal strength above noise column No. 16 on your report form.

Another simple report you can give is the time you first heard Oscar. Record

the time in G.M.T., next record the peak signal strength, and then the time you last heard the signal in this orbit. Another very important observation you can make is the number of seconds for ten Hertz.

The next comes the Doppler frequency shift. This can be done in a very simple way. Make up a crystal oscillator, place a variable condenser across the crystal, calibrate it plus and minus a few kc., beat it against the signal from Oscar when you first hear it, and turn the dial as Oscar comes closer and read off the difference in frequency, and plot a curve which will resemble the letter S.

Another method is in an article in "QST" written by Don Norgaard, W6VMH, March issue. If you cannot understand the report form fully, take a look at the article by Ed Hilton in "QST" covering data acquisition.

Now covers, there were 2,700 tracking reports on Oscar I. and 1,300 letters, but Australia only sent about four at the most. Yes, I know that a lot of you heard Oscar I. and tape recorded it, and so on, but how many took the trouble to compile the data they got, and sent it in? Don't let this happen this time. Let's give it the works. I know you will say I didn't know about it until too late, but this time most know about it in all States.

I must thank those fellows who wrote me, showing how keen they were, and I have sent all the information I have.

I suggest that each State print their own forms. I feel sure that the W.I.A. State Divisions are only too keen to help. I also thank the N.S.W. Division for their assistance.

Give this project all the publicity you can, as it is the greatest boost the Ham has had so far.

—VK2HO, Australian Co-ordinator.

## HINTS AND KINKS

### TUNING A MOBILE WHIP

The simplest way to tune a 40 metre mobile whip "nose-on" is to resonate it somewhere slightly below the centre of the phone band, say 7.0 mcs, then after everything is firmly cemented down, giving rigid stability, the top section is trimmed 1° at a time until the s.w.r. in the co-ax reaches a minimum at 7.1 mcs. (centre of phone band).

No matter what type of whip you may be using, 1° at the top represents approx. 30 to 50 kc. At any one dimension of the whip, the exact point of resonance can be read off v.f.o. which is tuned for minimum s.w.r. (N.B. regulations).

—Clem Maloof, VK2AMA.

### CHEAP METAL CASES

Can't afford metal cases for your converters, etc.? Then do what I did. I used half a one-gallon gas can for my converter. These painted, and with the joint facing downwards, make excellent cases after extracting the end section with the handle attached to it.

—Brad Booth, VK5ZL3.

### R.D. CONTEST AWARD WINNER

F.C.C. have advised that the call sign and name of R. J. Bay, VK9GP, was omitted from the results published in December issue in the awards section of the R.D. Contest.

He is the winner of the Award for VK9 with a total of 600 points in the open section.

### RADIO AURORA INCIDENCE

The following letter from the General Secretary of the Radio Society of Great Britain has been received by the Federal Secretary of the W.I.A. All replies to same are requested to be sent to David Rankin, VK3QV.

Dear Mr. Secretary,  
In connection with the analysis of L.G.Y. radio aurora information, the Society's Scientific and Technical Committee would like to request from your Society the dates if any, when Australian Amateurs were able to see the aurora for 2 metres work. In particular the following dates are of the utmost importance and any information concerning radio aurora on these dates (for example extent and types) would be most useful. Dates are:—

1957—September 28-30

1958—July 7-9  
November 12-14

1959—March 26-28  
July 14-16  
August 15-17  
December 4-6

1960—April 1-2  
March 31  
May 2-5 May 1  
October 8-7

This information is required to establish correlation of radio aurora incidence between the Northern and Southern Hemispheres. The Society's Scientific and Technical Committee will be most grateful if you can furnish information on this important matter at your earliest convenience.

—John Claricoats, General Sec., R.S.G.B.

★

### E.D.R. JUBILEE CONTEST

It is with great pleasure that the Radio Amateurs of Denmark invite all brother Hams to participate in the E.D.R. Jubilee Contest on 3.5, 7, 14 and 28 Mc. The 3.5m section starts at 1200 GMT, May 12 and ends 2400 GMT, May 13. Phone: 1200 GMT, May 19, to 2400 GMT, May 20, 1962. Logs should be sent to E.D.R. Traffic Department, Box 335, Aalborg, Denmark.

# Official Opening of New H.Q. Building for N.S.W. Division, W.I.A.

SOME few years ago the Council of the N.S.W. Division of the Wireless Institute of Australia formulated a plan which has culminated in the opening of the extensions to the headquarters property of the Division at 14 Atchison Street, Crows Nest.

The property, as originally purchased, consisted of a house situated in a central position on the north side of the harbour, one which is of easy access by public transport, and one with excellent parking facilities. The land on which the house is built allowed of considerable extensions to enable a building to be erected in the foreseeable future to form the headquarters of the Division, which with its present membership of 1250 members, requires a building to house all the facilities of the Division and to provide a meeting hall which will accommodate the members at the general meetings, v.h.f. meetings, s.w.l. meetings, and at the A.O.C.P. classes which are run by the Institute.

The main hall, which has been erected at the rear of the premises, is a large one, some 60 x 30 feet, tastefully constructed in texture brick, and surmounts a basement which will house disposals and the Bulletin activities.

Despite the delays due to bad weather which has been experienced in Sydney during our "summer," the building was in due course completed only one month behind schedule.

The Official Opening occurred on 17th March, 1962, and was attended by some 300 members, their friends and XYLs.

The Opening Ceremony was performed by Wal Hannon, VK2AXH, who is well known as the only surviving member of the Foundation Committee which established the Wireless Institute here in Sydney in 1910; supported by the President of the Division, Bill Lewis, VK2YB; Mr. Jack, M.H.R.; Group Captain Waddy, M.L.A.; Mr. Christain,

the architect; Mr. C. Carroll, representing the Superintendent Radio (Mr. Riley, who was unfortunately unable to attend); Ald. Hardwicke, Deputy Mayor of North Sydney.

The President in his opening address welcomed the dignitaries, members and their friends, and referred to the support which had been given by Divisional Council and members which had made this building a reality, and furthermore,



referred to the amicable relations which the Division has with, not only the P.M.G. Dept. through their officers, but also the assistance given to the Amateur Service recently by the members of the House of Representatives in Canberra. He thanked those members who had subscribed to the appeal for chairs which was organised so well by Frank Pearson, VK2ACQ.

Responding, Ald. Hardwicke, Deputy Mayor of North Sydney, stated that his

Council was pleased that yet another cultural organisation had chosen the North Sydney area in which to expand their activities, and wished the Division all success in their endeavours.

Mr. C. Carroll, P.M.G. Dept. representative, referred to the work of the Advisory Committee on our behalf, and also drew attention to the co-operation which the Department is always ready to give to Amateur and Viewer alike in cases of t.v.i., but stressed the importance of friendly relations between the Amateur and Viewer.

Mr. Jack, M.H.R., spoke on the outstanding public service given by the Amateur Service, referring to the work done by Amateurs during the disastrous floods some years ago and on the many occasions when the Amateurs have stepped into the breach and maintained communications in times of distress.

The final speaker, Mr. Waddy, further exemplified the importance of the Amateur Service in its capacity to provide ready trained operators for the Armed Services.

Wal Hannon, VK2AXH, reminisced on the past history of the Division in N.S.W. and referred to the work done by the many members through the 50 years of existence. Finally, Wal declared the extensions officially opened and unveiled a handsome plaque commemorating this historic event.

Our thanks are expressed to all those who assisted, especially in the final stages, to enable this event to proceed on schedule; to the many ladies who formed themselves, with Frank Pearson's assistance into an auxiliary, to provide afternoon tea for the large crowd attending; and to make this function one to remember.

## V.H.F.C.C.

Cer. No.	Call	Confirmations
		144 Mc. 50 Mc.
1	VK2VVO/T	100
2	VK5GG	114
3	VK3SQV	185
4	VK2HE	102
5	VK2HE	118
6	VK2HE	112
7	VK5BB	300
8	VK2HO	132
9	VK2AHR	143
10	VK5ZAX	100
11	VK4ZSE	100
12	VK4ZAZ	157
13	VK4ZAZ	847

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# ROSS HULL MEMORIAL V.H.F. CONTEST 1961-62 RESULTS

The Ross Hull Memorial V.h.f. Contest has passed and the Federal Contest Committee has pleasure in presenting herewith the results.

The new scoring system has brought forth many comments. We regret we cannot acknowledge each one individually, but we thank all those who have sent us their comments and we assure you that they will all be considered, when the next Contest is prepared.

The Contest Committee is very pleased to see from the letters received that the majority of contestants are in favour of the new scoring system, with perhaps a few adjustments, and some contestants suggest that activity has increased. However, the number of logs received was less than last year. The poor support of the Open Section seems to indicate that this section might as well be done away with as a separate section so that in future there is only one transmitting section, allowing all modes of transmission.

The duration of the Contest has come under fire again and some suggest that operators select a period of 7 or 14 days from the total operating period of two months for their Contest log. This, of course, would make it extremely difficult to cross-check logs. Another suggestion is that operating times be limited to evening hours and weekends. Suggestions have been plentiful and very helpful.

The general feeling seems to be that the densely populated areas have the advantage under the present scoring system and that some allowance is required in that regard. We have shown the location of each station, taken from the Call Book, alongside the scores so that interested operators can have a better idea what the situation is. This is another matter for review next year.

In conclusion, we would like to congratulate VK5ZDR for winning the trophy this year, and we also congratulate the other award winners.

We have had many queries about outstanding award certificates. We regret there has been a rather long delay in the supply of certificate blanks and want to assure all those concerned that their certificates will be forwarded as soon as the new forms are available.

Best 73 and good operating.

—Federal Contest Committee, W.I.A.

## TROPHY WINNER

VK5ZDR—M. J. McMahon ... 3357 pts.

## AWARD WINNERS

### Section A—Transmitting, Open

VK4PU—J. D. Purdon ... 1189 pts.

VK5TN—B. G. Tideman ... 1134 "

VK6HK—D. F. Graham ... 889 "

### Section B—Transmitting, Phone

VK1VP—E. Penikis ... 116 pts.

VK2ZLP—D. L. Price ... 1359 "

VK3ZEA—G. W. Small ... 1619 "

VK4AZ—J. L. Bickford ... 2038 "

VK5ZDR—M. J. McMahon ... 3357 "

VK6BE—J. R. Elms ... 2394 "

VK7ZAO—R. K. Emmett ... 905 "

VK8AV—A. E. V. Molineux ... 220 "

VK2TR/9—R. Taylor ... 386 "

ZL1AUM—C. Maddock ... 670 "

ZL3RK—T. J. McKenzie ... 650 "

### Section C—Receiving

WIA-L2211—R. Abernethy ... 1660 pts.

VK4—T. H. Lane ... 69 "

## INDIVIDUAL SCORES

### Section A

VK4PU—Woombye ... 1189 pts.

VK5TN—Adelaide ... 1134 "

VK6HK—Wembly Downs ... 889 "

VK6VF—Wembly Downs ... 197 "

### Section B

VK1VP—Canberra ... 116 pts.

VK2ZLP—Armidale ... 1359 "

2ZFB—Cronulla ... 1288 "

2ZCF—Sydney ... 847 "

2ZGL—Inverell ... 664 "

2ABR—Milperra ... 653 "

2ZDA—Miranda ... 517 "

2ZAD—Delungra ... 480 "

2ZGM—Ungarie ... 344 "

2ZBI—Via Junee ... 135 "

2ZBM—Lismore ... 10 "

2HE—Check log ...

2ZEX—No mileage shown, disqual.

VK3ZEA—Rainbow ... 1619 pts.

3ZGZ—VIA Mildura ... 1221 "

3ZCG—Morwell ... 724 "

3QV—East Malvern ... 547 "

3ZMK—Ferntree Gully ... 505 "

3ALK—Melbourne ... 437 "

3ZDO—Melbourne ... 370 "

## Section B (Continued)

3ZKM—Ferntree Gully ... 347 "

3ZLP—Via Geelong ... 283 "

3ASW—Via Renmark ... 279 "

3ZMC—Frankston ... 235 "

3AJ—Newport ... 165 "

3FW—Canterbury ... 147 "

3ANG—Bentleigh ... 68 "

3NB—Camberwell ... 67 "

3GW—Rainbow ... 23 "

3ZKO—Frankston ... 15 "

VK4ZAZ—Rockhampton ... 2038 pts.

4ZBE—Townsville ... 1538 "

4ZHG—Gymple ... 887 "

VK5ZDR—Henley Beach ... 3357 "

5AW—Penola ... 3016 "

5ZBR— ... 914 "

5ZBL—Vermont ... 728 "

5ZDI—Penola ... 594 "

5ZDA—Salisbury ... 369 "

5ZBC—Mile End ... 166 "

5ZCD—Via Bordertown ... 14 "

5GG—Check log ...

VK6BE—Lesmurdie ... 2394 "

6ZAA—Mt. Pleasant ... 1461 "

6RY—Palmyra ... 852 "

6ZDS—South Perth ... 625 "

6ZCD—Albany ... 563 "

6MM—Nedlands ... 453 "

6FM—Mt. Pleasant ... 438 "

VK7ZAO—Hobart ... 905 "

7ZAG—Hobart ... 815 "

7ZAV—New Norfolk ... 456 "

7ZAC—Hobart ... 141 "

7ZAX—Hobart ... 67 "

VK8AV—Daly Waters ... 220 "

8AU—Batchelor ... 60 "

VK2TR/R—Port Moresby ... 386 "

ZL1AUM—Auckland ... 670 "

ZL1AKY—Papakura ... 340 "

ZL3RK—Christchurch ... 650 "

### Section C

WIA-L2211—R. C. Abernethy, Sydney ... 1660 pts.

VK4—T. H. Lane, Brisbane ... 69 "

WIA-L3074—J. M. Hilliard, no mileage shown, disqualified.

VK—K. A. Wehr, no mileage shown, disqualified.

P.S.—Although listeners cannot agree with the stations on the mileage, the showing of distances is a requirement of the present rules and distances could have been worked out by use of a map and the Call Book.—F.C.C.

## CATHODE RAY TUBE CHARACTERISTICS

Tube Number	Diam. Inches	Heater Volts		Anode 1 Volts	Anode 2 Volts	Grid Volts	Anode 3 Volts	Diam. mm.	X Plates	Y Plates	Sensitivity mm./volt	Colour	Persistence of Scan	Deflection Type	Base Type
		Amps	Volts												
2AP1	2	6.3	0.6	250	1000	-60	—	52	0.110	0.13	Green	Medium	ES	U11	
3BP1	2½	6.3	0.6	575	2000	-60	—	76	0.127	0.172	"	"	"	U14	
VCR139A	2½	4	1.1	800	120	-10	800	64	0.217	0.217	"	Medium	"	PS12	
3FP7	3	6.3	0.6	575	2000	-60	4000	76	0.1	0.14	"	Medium	"	U14	
3AP1	2½	2.5	2.1	430	1500	-50	—	76	0.223	0.233	"	Short	"	USM7	
DG7/5	2½	6.3	0.3	—	1000	—	—	76	0.16	0.25	Blue	Short	"	B9G	
5FP7	5	6.3	0.6	250	7000	-45	—	127	—	—	Green	Medium	MG	O	
VCR517C	6	4	1	2000	525	-80	3000	160	0.12	0.14	Blue	Long	ES	CK12	
VCR97	6	4	1	200	450	-100	2000	152	0.3	0.57	Green	Short	"	CK12	

ES = Electro-static; MG = Magnetic. All above are electro-static type focus.

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# Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

## GENTLEMEN'S AGREEMENT

Editor "A.R." Dear Sir,

The literary eloquence of Mr. Jones no doubt will add to the ranks of the "fone only" clan but as far as I am concerned much of what he quoted is biased beyond belief.

He appears to have completely forgotten the main issue at stake! Amateur Radio is our hobby and this is still a free country—even though we are forced to read, hear and watch what we like and do what we like.

Unlike the above gentleman, I am a lowly technical soul whose choice of chores is telecommunications in which field I come in contact with all types of equipment from plain c.w. to facsimile.

Even the most advanced communications system still uses c.w. as "the old stand by". Perhaps it is outmoded as a form of commercial communication, but it still is, and will continue to be used by the public because after Mr. Jones' ideologies have been forgotten.

May I ask him if he can still work 100% intelligible DX and have a good rag chow on 49 or 80 and still get a thrill out of it? Can he buy us some little winter coat so he can't stick to mine and what's more, you stick to your brain washing and let other people do and live the way they want.

—Another VK5\*

(Name supplied to Publications Committee and withheld by them.)

Editor "A.R." Dear Sir,

Mr. Jones' recent letter is, of course, as ridiculous as his previous ones. It is devoted to a ploy in the name of democracy, for the continuation of this one-man soap box, yet Mr. Jones fails to realize the simple fact that even he has had no legitimate support in these columns for his wild claims.

Mr. Jones' assumption that those who replied to his previous correspondence—"the minority"—were "c.w. nuts" is a ridiculous statement on the part of the remaining body of members, which lack of interest Mr. Jones construes to be an indication of tacit support for his cause—this conceit, of course, is ridiculous.

The stations mentioned in Mr. Jones' soap-seller friend were obviously compiled by a person with no technical knowledge of the subject with which he was dealing. Mr. Jones admits to having "spent many years in journalism," and that he is a recognized authority "abroad in economics from three countries," but I fail to see the connection with analysis of the frequency spectrum and rate of information transfer, yet we are asked to accept, even believe, these obvious falsehoods.

It is apparent that most correspondence has indicated the feeling of members on this subject, so I feel that no further purpose can be served by this interminable correspondence, or the refutation proposed by Mr. Jones.

I would suggest that Mr. Jones may be better appreciated by his "dear friends in the Arab world," than by the vast majority of Australian Amateurs.

—Ian N. Cousins, VK5SK.  
Editor: "Splatter"

Editor "A.R." Dear Sir,

This time, Mr. Editor, please don't exercise the editorial hatchet, until after some of us have an opportunity to reply to Mr. Roth Jones, who appears to have built into him something worse.

Mr. Jones' main difficulty appears to be the fact that so far, except for the efforts of his distinguished, but anonymous, business friend, his vocalisation has been sole work. He appears to be unable to stir up one single supporter. On the other hand, it is quite apparent that Mr. Jones' opponents are so numerous that their replies are an embarrassment to the Editor.

As far as myself and figures are concerned, Mr. Jones, you were given them last month, but apparently preferred to keep your head under its customary sand dome.

I quote Cyril Pickett's letter: "... c.w. 34% and 32% ... 22% ..." the figures come from the R.S.G.B. Bulletin, which is quoting the A.R.R.L. report. Even your businessman, no matter how clever he is, cannot refute those.

Finally, Mr. Jones, most of the interested parties over here prefer to ignore your comments since you are obviously trying to stir up an argument. I also have come to that conclusion. I suggest that you make use of your obvious talents in the next Federal election; if successful, you possibly would be able to persuade the Amateur bands with his belief c.w., but you could certainly give much needed support to the Amateur cause.

—Bob Elms, VK6BE.

[The above three replies, taken at random, are readers' opinions. Unless other readers can offer new facts, not discuss personalities, then correspondence on this matter will be closed.—Editor.]

\*

## Emergency Services & S.S.B.

Following the recent disastrous bush fires in Victoria, Group Capt. W. R. Garrett, M.L.C., in whose Southern Province most of the fires started, spoke to C.F.A. associations people and learned that interference on the emergency channel had been quite serious and had hampered the handling of the fire fighting personnel.

In demonstrating this to Geoff JAC (exZGT), the idea of a demonstration of what s.s.b. nets are doing every day on 7.1 Mc. was decided on and a date set for such a demonstration. Group Capt. Garrett duly arrived at JAC's shack on Thursday afternoon at 4 o'clock and 12 active sidebands were ready and waiting to go.

The method of clearing the air was to use a 500 cycle tone at JAC's rig. 3AC functioned as the controller to carry the following stations in the net: 2JK Mornington, 3OZ Ringwood, 3HG Coleraine, 3AHQ Kyabram, 2AKC Tingha, 3XK Ormond, 3EFV Gawler, 3KB Brunswick, 3ADL Frankston, 3ABP Ballarat, 3LY North Balwyn. At JAC's QTH all stations were 5 and 9 with the exception of 3EFV, who was 5 and 6 from his car near Gawler.

The programme was carried out as follows:

(1) Each station was called in to identify itself and to give its location.

(2) It was explained that when a 500 cycle tone was heard all stations should cease transmitting and should listen. All stations using fast action were.

(3) All stations were asked to insert carrier wave and to detune to give Group Capt. Garrett a demonstration of heterodyning by a number of a.m. signals slightly off frequency. However, for the one minute of the demonstration, which could not be seen, were a couple of low frequency "growls". It appeared that each station had relied on the other fellow to detune his rig. So this one was repeated with stations detuning various amounts up to about 3 Kc. This then resulted in an application of the chaos we sometimes hear on Sunday mornings on 7 Mc.

(4) The next demo. was to ask all 11 stations other than 3AC to hold an 11-way QSO, through 3AC, on 7 Mc. for one minute. This resulted in a most interesting performance. It was noted that particular voices could be picked out and followed when more than one person was talking.

(5) The next demonstration was to show how four stations could carry out two QSOs on upper and lower sideband on the same frequency. It was possible to tune from one sideband to the other and resolve each separate QSO. The result was a very strong suppressed sidebands, which disappeared below a strength 5 notes level, which was prevailing.

Group Capt. Garrett replied to the stations concerned and thanked them for their interest in the emergency services. He promised to bring the results of the s.s.b. before the special meetings of parliament which were convened to deal with the problems associated with emergency operations.

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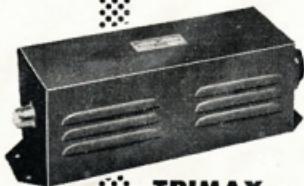
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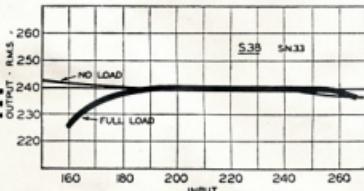


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# SIDEBAND

## Phasing, Xtal Filters, Balanced Mod., Linear Amps., Vox

Sub Editor: BUD POUNSETT, VK2AQJ,

6 Alice Street, Queanbeyan, N.S.W.

ADDRESS CORRESPONDENCE FOR THIS PAGE DIRECT TO THE SUB EDITOR

### BRITISH PRODUCTS

When high quality sideband transmitters and receivers are mentioned, most Australian Amateurs immediately think of the impressive array available from the U.S.A., but making an impression on the Australian market are some products of K.W. Electronics, of Kent, England. Quite a number of VKs are already using the K.W. "Viceroy" s.s.b. transmitter\* and there are now three models, the Mark I., II., and III., all in use in various parts of the world. The disassembly of the Mark I. "Viceroy" was the upper sideband only being available on 40 m, but this has been amended in the Mark II. and III. models. The s.s.b. is generated at 495 kc. and a crystal lattice filter is used for this purpose. A highly temperature compensated Clapp v.f.o. is used, tuning from 3065 to 3785 kc., resulting in s.s.b. output in the 80 m band. Suitable crystals are used in the second mixer to give output in the other bands, and to mix with the v.f.o. on 80, 40, and 20 m, on 20, 15 and 10. A pair of 6146 tubes in Class AB1 in the final give 180 watts p.p. input, the output circuit being a pi-network and the final stage is neutralised and completely screened as a type of protection. A sample of the output is used to provide automatic level control, resulting in an increased average level of output without splatter and objectional distortion. C.w. is also available and the overall level of the signal is adjustable by inserting carriers to about the 90 watt input level. Vox with anti-trip is incorporated and is also used to give break-in on c.w. The mark II. "Viceroy" has a separate power supply, while this is included in the cabinet of the mark III.

The KW77 communications receiver is a fine companion for the "Viceroy" transmitters. The physical appearance is very attractive, and while it may have excellent XYL appeal, the design behind the front panel will be appreciated by those interested. This receiver, like the transmitter, is a crystal controlled front-end, covers all Amateur bands from 160 m to 10 m, has selectable sideband, and a choice of LF selectivity giving bandwidths of 1.8 kc., 3.6 kc., and 9 kc. at the 10 m point. The second intermediate frequency is 90 kc. and an L-C filter, made up of switchable bandwidth "pot-cores", is employed. The inductances are shielded to canons to give best possible circuit isolation for optimum receiver response. The maximum frequency coverage is 600 kc. on any one band so that the 10 m band is covered in three segments, 28.0-28.6, 28.6-29.2, and 29.2-29.8 Mc. The performance figures claimed are for sensitivity, selectivity, abso. ratio and noise stability of better than 100 c.p.s. after warm up. The physical dimensions of the KW77 receiver are 15 x 6½ x 12 inches.

**MODIFICATIONS TO K.W. "VICEROY" MK. I.** The lack of legal sideband on 7 Mc. has been a serious disadvantage to owners of the "Viceroy" tx Mark I. It is fairly easy to modify the Mark I. for lower sideband production on 7 Mc. and we show details hereunder.

#### Components required:-

- 1 only 3-pole M/B relay, contacts normally open
- 3 only 110 pF. trimmer capacitors C1-C3
- 2 only 60 pF. silver mica capacitors C4-C5.
- 1 only 4915 kc. crystal.

The relay can be operated from the 250v. rail or any other suitable supply. The purpose of the relay is to switch the 40 m antenna to the 7 m antenna, the transmitter IPTA and the grid input to the second mixer. This relay can be operated from the spare 40 metre connection on the rear section of the wave change switch.

Step 1.—Insert C1 and C4 (parallelled) between ground and anode of V2B through relay contact 1. Contact closed only on 7 Mc.

Step 2.—Insert C2 and C5 (parallelled) between ground and anode of V2A through relay contact. Contact closed only on 7 Mc.

Step 3.—Insert C3 from hot end of L5 (in parallel with C49) through relay to ground. Contact closed only on 7 Mc.

Step 4.—Replace existing 40 m crystal with one of 4815 kc.

Step 5.—Re-resonate anode coil L1A at 9630 Mc.

\* Local agents, R. H. Cunningham Pty. Ltd.

Step 6.—Adjust C1, C2, C3 and L1A for maximum drive in "tune" position.

The dial calibration should remain the same as before. It is advisable to conduct any tests into a dummy load, and to check output against a frequency meter.

The adjustments listed under Step 6 are the only ones which should be made. Any other adjustments would impair the performance of the transmitter.

Many thanks go to Bob VK3ML for supplying the details on the K.W. equipment.

### KW76 DX CONTEST

The week-end of March 24/25 was devoted to the 1962 "QSL" World-wide S.S.B. DX Contest in which many VK stations participated. Conditions were generally quite good in Eastern Australia and most Eastern States contestants would have had little trouble in making W.A.C., particularly on Sunday afternoon when the sun set, the whole world was on 20 m at the one time.

This Contest was a very well mannered affair without the dog-eat-dog aspect of some past experiences in a.m. and c.w. days. Possibly the reason for this is that operators never care less fayred by the lack of screaming heterodynes. The superior readability of sideband and the operating convenience afforded by Vox also makes for much faster exchanges.

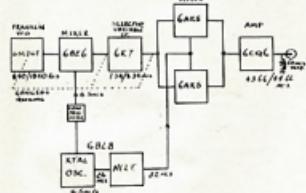
There is no doubt that the vox can be left on a contest such as this. It is essential that Vox be employed so that the operator is not slowed down by having a switch or worse, switches to throw. Transceive-type tracking of rx and tx would eliminate the need for setting rx automatically positions the tx on the same frequency. An alternative to this is to use a proximity switch on the v.f.o. control so that one puts a hand near the v.f.o. control knobs when the netting circuit is operated. GST has described a very simple such device called "Proxox".

A good over-drive monitor should be employed, one inclined to get a little anxious in contests. One way of doing this is the only way to be sure is to use an oscilloscope. Automatic level control, similar to that used in the VK3ON tx ("A.R.", Feb. '62, p.23), not only removes this worry, but your average level or half-power point is guaranteed. A sideband tx lends itself for the easy installation of this s.l.c. It has the same effect as a speech compressor in an a.m. modulator, but only uses a mere handful of components.

Now is the time to start preparing for next year's battle. The new 1963 "QSL" year seems to be starting to "CQ Sideband" Editors, 12 Elm St., Lynbrook, New York, U.S.A. The deadline is for your log to reach there not later than May 30, 1962, so DO IT NOW.

### HETRODYNE V.F.O.

Last month mention was made of the v.f.o. control that VK3AHL has on the 288 Mc. band. Fig. 1 shows a block diagram of the heterodyne v.f.o. unit that Lance uses in his 50 Mc. equipment which in turn drives the 288 Mc. unit.



You will notice that at no time is the actual variable oscillator's frequency multiplied, only the output of the 6.5 Mc. crystal oscillator is multiplied in frequency. While some may say that this adds up to a lot of components and since the end result of superb stability justifies this.

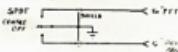
Some of you may give thought to applying this technique in producing a 14 Mc. signal for that 9 Mc phasing exciter to give a really stable signal on 40 m.

### 40 AND 80 METRE DX

I know that quite a few of you have been working all sorts of DX on 3.5 and 7 Mc. How about sending the details, frequencies, times and so forth to Al Shewsmith, who runs the DX section. Al would be delighted to receive these reports and it will help to spur some of our other sidebanders to greater achievements.

### KW76 CONTROL CIRCUIT

Some of us are lucky enough to have a KW76 to play with so this item, taken from the S.S.B.A.R.A. "Sidebander", should be of interest. It was written by KZSSW, Box 2515, Balboa, Canal Zone, and appeared in the December "Sidebander".



Without buying the handy-dandy control box for the KW76, push-to-talk operation is not normally possible. One method is to simply disable the vox, to prevent noise. J. Ops. from tripping the vox entails lifting the lid and reducing the vox gain. This is not always convenient. Here is a simple, cheap way around the situation. Obtain a single-pole double-throw switch with a "centre off" position, two lengths of shielded phone cable and a bracket to mount the switch in a convenient position. Proceed as follows:-

1. Attach phone plugs to one end of each cable.

2. Connect centre conductor of one cable to end terminal of switch.

3. Connect other conductor remaining cable to other end terminal of switch.

4. Insert one pin plug into PTT jack of KW76 or 32S1.

5. Insert other pin plug into phone patch jack on KW76 or 32S1. (Note. If this jack is in use connect lead in parallel with existing lead).

6. Test operation as follows: With switch in centre position, operation should be normal. With switch in position to ground, PTT, vox should be in keyed on operation. With switch in position to ground the phone patch plug, all audio input will be grounded so vox will not operate, and the rig will be "receive only".

7. Mount switch in a convenient position. ★

The Publications Committee requests all senders to forward details of apparatus they have built. Technical description and photographs of equipment are particularly welcome.

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Sub Editor: ROBERT YOUNG, WIA-L3076,

14 Alverna Grove, Brighton, Victoria

ADDRESS CORRESPONDENCE FOR THIS PAGE DIRECT TO THE SUB EDITOR

## VICTORIA

Last general meeting of the Group, 11 members were present. Suggestions for the running of the construction night were put forward by Craig Cook and nothing was decided. Noel L3010 had reported that he had made up stations at 5 and 8-9: VK5HKV, VK5QL, VK5CSV and ZL2ABL. Noel has completed the construction and erection of a 30' WIRK and it is now in service for the winter months. While no antennas in use are a 29' mx doublet and also a 15' mx doublet. Noel has now settled down in his new shack, being a spare bedroom, and is still active for the winter months. It is welcome to see the winter months bring with them a new member, the new member is Noel's XYL.

Mac L3074 has recently purchased a 40 ft. steel tower with rotating motor and turning indicator. On this he has put up the project as it is permitted from the Council to erect it. Mac was active in the recent S.S.R. contest, he heard 50 countries during the Contest. During the month, Ws were heard during the contests and also a few Europeans.

Maurie L3002 is still listening and climbing steadily up the DX ladder, latest cards received by Maurie are UBBWS, 15GN, HAW5S.

Craig L3093 is eagerly waiting for a 2 mx converter which he is getting for a swap for a 522 rx from an Interested Amateur. He hopes soon to be receiving on 2 mx.

Ian L3006/VK5ZBHZ has had a sudden urge to get on the 10m band and has now under construction a xtal locked converter and tx for 2 mx.

Ian L3006/VK5ZBHZ has recently become very interested in hi fi stereo sound. He recently purchased a stereo amplifier and together with his new job as a teacher at the Springvale High School still finds time for listening to the DX, but as yet has not constructed a tx for 10 m, however plans are being put together for the tx.

Twelve members attended our first visit for the year, to Channel 7 tx at Mt. Dandenong. We were shown over the station and the main tx room, emanating the micro-link rx and also the plumber's delight, being the dummy load antenna and the antenna coupler. The technician on duty, who we later found out was the manager, was most helpful in showing everything including the setting up of parabolic reflector amplifier, to receive the outside broadcast van which could be fed into the main tx if required. It seems the only way to get a job at Channel 7 is to be an Amateur because out of the staff of five, there are four Amateurs.

Other visits have been arranged for the next three months by Ian Woodward. They are: May 4 Rockbank, Rest tx station at 8.30 a.m.; June 10 Diggers Rest tx station at 8.30 a.m.; July 6, Moorabbin Radio Club at 8.0 p.m. Persons requiring transport for the above visits meet at 478 Victoria Parade one hour before the start time of the visits. So chaps, don't forget to attend, after all the visits are arranged for your interest.

Someone called Ian L3006 alias VK5ZBHZ, who tells me was the new USZ spy at Warrnambool at cult S.W.L. station, was seen on 1st April. It was Peter's (3FX) Holden station sedan with nine people on board, seeing the sights of Warrnambool. Did the Mt. Gambier boys go to the Olympic Park for a swim or to catch monkeys with their one metre halo?

What Amateur had trouble making contact until he used a microphone? What worked? Is it considered fair to hold a xtal set over the tank coil of a tx, then demand a QSL card for having received the signal? The listeners got the card anyway.

Maurie and Ian called CQ 6 mx for ten minutes without success, but finally scored a contact when the h.t. was turned on for the tx.

That stack of timber in Kororo Street was Peter's (3FX) shock. It burned at 10 p.m. and 15 listeners tried to squeeze into it. Robert Young Ian still won't tell what happened after the Fire Department told him it had nothing to do with radio. In fact 3FX was still on the air through the night. The last time I saw it was us, we saw the volcano crater. Yes we saw it, we almost ended up at the bottom of it!

Who was the listener that claimed the weak 6 mx signal was 2VK? It ended up a terrific

contact with 2WK who talked us right into the back yard of the hotel.

A well known Amateur from Smoko stood up to say he never publishing while in contact with the boy attending the Convention. Have you got rid of the xtal set yet Arthur? Eric Treblecock was seen distributing a mass of QSL cards and collecting just as many to take back to Australia.

The Mt. Gambier gang decided to convert their 288 Mc. gear to the 50 Mc. band, where ZB2I and 3WK were operating. We heard a rumour that new coils brought it down to 70 Mc., but the 30 Mc. coils were still about. The official statement read "Owing to mechanical difficulties, we will not be able to operate... Hope you got the damage repaired, boys. So beware, this spy will be getting information at the next Convention. See out the whole chapter, the above information is the story of what went on at the Convention, rather amusing I think."

All members and myself wish to thank the Amateurs of Warrnambool for their hospitality and arrangements for visits to various places of interest. Without the help of these Amateurs the Convention would not have been such a success. I wish to thank Eric SANQ, Peter 3FX and Bill 3WK for their help.

## RADIO MAIL

The mails received this month are from the following: Peter Drew, Den Grantley, Afton Westcott, and Chas. Abernethy. Eric Treblecock this year has heard 92 countries, 33 zones and has sent out 269 reports. This month's inwards card include: UAIKEED (Franz Joseph Land) which came via air mail, which is a new one. Others for the month so far are: ZB2I, KHE6J (Kure, Japan), third from that country, KHL5J, VK5NCF, SM7BYE, UL8KAD, VE1AGV, VE1KX, VK5NCI, VR1M, VR2ER, ZKAGJ (WSSMMZ (3.3 Mhz), VJ1MA, ZC1XH, ZL2AYL, ZSSUR, and VK5QZ/ZL2AYL. Eric's log entries total 222,776 and QSLs total 7,442.

Bill John, from VK4, has collected quite a few more QSL cards since he last wrote, but unfortunately the list of the cards that he enclosed in the letter has been misplaced. The VK4 Division of the W.I.A. want Bill to form a S.W.L. Group after receiving information about starting a group from us at VK3.

After L2159/VKA4 unfortunately is tied up with business interests and is unable to spend the time he would like to in listening. There has been no further break through from VK on 50 Mc. and strangely enough no sign of the JAs as yet. Chas Afton is monitoring the band for me each night. Maybe they will be later this year.

Chas L2211 has at last received confirmation of the four ZL districts on 50 Mc. after trying for some time. So he reported to Elizabeth Avenue, Avondale, 50 Mc. On 16th Feb. Chas decided to change back to some h.f. listening and heard a large number of DX stations on 14 Mc. phone. That Eddie's station is certainly performing very well. Chas has just completed his first two years as a s.w.l. and is more than pleased with the results during that period. Recent cards received—50 Mc.: VK2S, 3, 4, 5, 6, 7 and ZL1, M1, HK4KAB.

Peter L2021 reports that 20 mx has changed completely. It is now useless at night and fair in the afternoon for Europe and the States. 40 mx is very good for Ws on s.s.b. at about 0630 hrs. Also heard G2PU and G8FO and about 1000 hrs. heard 9ZBZ. Peter says: It looks as though conditions are changing for the winter period. The bands are much quieter and peaceful for the winter conditions.

Now a few words from Don L2022. He asks: How many of the listeners in to 10 pm, being played out on 20 mx, sideband on March 18 at 0200z, when KHEBMM/Aero Mobile was searching for a U.S. Navy seaplane which was forced down in the Pacific east of the date line. The search was for the crashed commercial airliner! The seaplane was forced down when an engine caught fire, and on extinguishing it the craft was unable to take off. Bob KHEBMM located and shepherded the floating plane until it was picked up. The location was 13 degrees north, 174.43 degrees east. Just another case of the Amateur providing an emergency service, for as well as the search, communication was maintained between Bob and KR6KS.

A local Amateur was looking at my log the other day and noticed some c.w. entries on 40 metres where I had been logging W stations. The chap commented that amateur radio is not much the W had heard the very weak DX but that they had been found in the first place. OK so you want to know eh? It's up to Frank to explain the steady swinging key of Frank's 20 mx. I am sure that 20 mx is close by. Talking of 20 mx, it has really been active this month, the States are coming in frequently, and there is plenty of DX about as well.

The DX front looks particularly good from Australia this year was the best year ever had, with 100 countries being worked. This one looks better. 20 mx has been more consistent of late, whilst there has been a wealth of DX on 40, 30, 15, and 10 mx is open regularly to the States and Canada. In a.m. daily—that is if you are home to listen to it. It's good to hear something from 10 metres, it is a good band and an asset during the contests.

On the DX side of things, we note such stations as UARAU, ZL2AS, TP2AS, VK5GAA, UH88I, CX2AA, VSOCD, UG3A, UG3B, UR2AB, UP2AS, SW5WBQ, CY, CTINT, WP6PV showing up using various modes this month. It is great to find some really good DX about again.

Well chaps, that's all for this month. 73, and best of DX, Robert L3076.

## S.W.L. DX LADDER FOR APRIL

	Countries	Zns.	S.s.b.	W
Conf.	Hrd.	Conf.	Hrd.	Conf.
E. Treblecock	277	282	40	—
D. Granley	101	249	37	14
A. Westcott	84	159	31	92
M. Woodward	10	10	—	11
M. Cox	44	210	24	8
C. Abernethy	32	71	22	—
P. Drew	31	176	18	7
N. Harrison	26	128	—	—
L. Thomas	25	25	20	—
D. Jenkins	17	131	16	6
H. Burger	6	185	5	19
N. Fisher	3	36	3	—



## VHF NOTES

(Continued from Page 12)

### PAPUA

March opened very quietly in VK5. No Mc. breakthroughs were observed at all during the first three weeks. The first breakthrough to JA came on the evening of 20th, when weak JAs were heard from 1913-2145 hrs. For the remainder of the month they were heard or worked each evening, with the exception of 29th and 31st. Very few JAs were heard during CQ in English, which would indicate that no DX was being observed by them. On two occasions I heard strong VK5AU, but no sign of David at this QTH.

On 26th, a K6 was heard amongst the JAs, but the full call sign could not be identified. Band openings have been from approx. 1930-2200 hrs. with, as yet, no daytime opening here. No VK5s were heard during the month and t.v. channel 1 was heard once during the morning. A t.v. picture channel around 69 Mc. has been heard twice (beam heading north) during JA openings.

BINW is back on 6 mx again after a few weeks absence from the air. Newcomer to 6 mx is 9BS. From March 1st a 20 mx converter in operation and a tx all set to go, so we expect to hear you soon, Bob. At the time of writing, 9ZBV is in Brisbane on leave, but should be here by the time these notes appear. DX news from the local bands, Rob 9RG, has appeared at 9AU's shack on a couple of evenings recently to hear the JAs on 6 mx; with a little coaxing he may even get around to hearing a signal on 6 mc. With the absence of 9ZBV there has been no activity on 2 this month. 9AU has recently added a cascade 6CW pre-amp. to his 6 mx converter and 9CK is engaged in a similar project at the moment. 9AU.



# FEDERAL AND DIVISIONAL MONTHLY NEWS REPORTS

(SEND CORRESPONDENCE DIRECT TO DIVISIONAL REPORTER NAMED AT PARA. END)

## FEDERAL

### OBITUARY

The W.I.A. offers Peter Dunnage its sincere sympathy on the loss of his wife. Peter was originally a P.M.G. licence examiner at Melbourne but was transferred to Hobart. He is now at 10 Blamey St., Mt. Gravatt, Qld.

### NEW CALL SIGNS (DECEMBER)

VK—Australian Capital Territory  
1QJ—R. K. Roseblade, 85 Finniss Cres., Narrabundah.

ISG—T. A. Brinkley, 9 Fauner Cres., O'Connor.  
1TM—T. R. Moore, 165 Eynes St., Griffith.  
1WF—P. V. Ingles, 28 Green St., Narrabundah.

New South Wales

2DU—D. R. W. Fullerton, 16 Larmer St., Narrabeen.

2FC—F. Finlayson, 59 Newcastle Rd., Wallsend.

2HD—Mrs. H. M. Davies, 32 Langtry Ave.

2II—B. Dale, 18 Robinson St., West Wollongong.

2TK—E. Thompson-Boyd, 2 Jill St., Blacktown.

2WC—W. J. Melville, 54 Travers St., Wagga.

2AAV—H. C. Burton, 50 Edgewell Rd., Wooloowin.

2ANO—A. Simmensen, Lot 16, Koorabel Ave., West Wollongong.

2AW—D. G. Allen, "Lyndan," Fitzroy St., Waculta.

2CH—C. Henderson, 649 Blaxland Rd., Eastwood.

2IM—A. Mackenzie, 103 Denison Rd., Dulwich Hill.

2LE—E. Thorne, 25 Harefield Close, North Epping.

2PL—R. L. Bowe, 16 Edgar St., Auburn.

2RU—R. C. Usher, 24 Falcon St., Crows Nest.

2ZVW—D. E. MacNaughton, 50 Killeston St., East St. Ives.

2ZWC—P. W. Campbell, 3 Earl Ave., Ashfield.

Victoria

3ADF—G. M. Nicholls, 14 Somerset Rd., Glen Iris.

Queensland

4RF—F. J. Lubach, 21 Bowelles St., Camp Hill.

4ZRH—S. A. Hazlett, 372 Cavendish Rd., Coorparoo.

4ZRJ—R. C. Harris, 6 Gurley St., Wavell Heights.

South Australia

5BM—M. R. Winterson, 7 Elmgrove Rd., Salisbury North.

5WV—J. D. Verrall, 8 Pertwood Rd., Elizabeth North.

5YA—G. M. Gluyas, Station: Section 451, Hundreds of Telowie, S.A.; Postal: Private Bag Pt. Pirie.

5ZQ—N. L. Burford, 85 Belair Rd., Panchito Park.

5ZZ—E. R. Barker, 41 Gertrude St., Glandore.

5ZEA—I. C. Batty, 3 Gilbertson Rd., Seaford.

4ZJR—P. J. Russell, 28 Richmond Rd., Westbourne Park.

Western Australia

6TS—A. G. L. Schofield, 67 Streatham St., Kenwick.

Northern Territory

8AU—D. D. Tanner, Batchelor.

8GI—G. K. Jenkins, Railway House 1001, Alice Springs.

— \* —

## FEDERAL QSL BUREAU

Any information on the station on 14 Mc. e.w. during March and April signing CR10AB would be appreciated by this Bureau.

Results of the 2nd Asian DX Contest, staged by the J.A.R.L. and the M.R.C. on 14 Mc. e.w. from 1st to 20th March, will be published. The contest period is from 1600 GMT, 25th August, to 1600 GMT, 26th August. The serial numbers exchanged will consist of five figures—RST report plus age of operator. (Apparatus not provided is made for centenarian operators!) YL operators may substitute 60 in lieu of age!

Points and multipliers: For non-Asian Stations—A contact only with an Asian station will count one point and a multiplier of one for each Asian country on each band.

Scoring: The score of each single band is the country multiplier multiplied by the total contact points on that band. The total of all band scores is the sum of country multipliers of all bands, multiplied by the sum of contact points on all bands.

All logs must be postmarked not later than 20th September, 1962. Send all logs directly to J.A.R.L. Att. Contest Committee, P.O. Box 377, Tokyo Central, Japan.

A supply of rules and log forms has been distributed to the various QSL Managers and a further supply is held at the Bureau and may be had on application with s.a.e.

Plans for a DX-pedition to Nuevo Baja and Swan Island have been completed. One of the operators will be a member of the DX-pedition to the research Nuevo Baja on 1st April and will remain there for four days signing HK0AB. They expect to reach Swan Island about 1st May and remain for two days signing KS4BF. All bands and modes will be used.

— \* —

Ray Jones, VK3RJ, Manager.

## NEW SOUTH WALES

### EXTRAORDINARY GENERAL MEETING

The first meeting to be held in the new headquarters building at 14 Atchison Street, Crows Nest, was an Extraordinary General Meeting held to consider the following Special Resolution:

"That the Honourable Allen Fairhall, VK2MF, be elected an Honorary Member of this Division in recognition of his services to the Amateur Radio movement in the political field."

The President, Bill 2YB, opened the meeting at 7.55 p.m. to an attendance of approx. 100 members. He referred to the outstanding work done by Mr. Fairhall in this regard and stated that it will be resolved here that since a representative of the Wireless Institute was appointed to the Delegation to Geneva, the late John Moyle, VK1JJ, and later a representative was appointed by the R.A.R.C. thus enabling the Amateur Service to present their case on Frequency Allocations.

The motion was supported by Frank 2QL, Dave 2EO, Graham 2AGH, Pierce 2AQZ and Ken 1AIL. It was carried unanimously by the meeting.

### ANNUAL GENERAL MEETING

The Annual General Meeting which followed was opened by the President at 7.30 p.m. Apologies were received from 3OM, 3FA, 2AKB, 2AUK. The minutes of the previous Annual General Meeting were read by the Minute Secretary, Max 3MEP. The Returning Officer, Bill 2YB, was appointed and six scrutineers were selected to conduct the business of the ballot for the election of officers of the Division for the ensuing year.

The Treasurer's report and balance sheet was read by the Honorary Auditor, Jim 2PM, who disclosed that despite the great call on the funds of the Division during the year, it had been satisfactory. The report was adopted. Graham Hall praised the work of the Hon. Auditor and on his motion, Jim was appointed for yet another year.

The President's report, which had been sent to all members, was adopted on a motion which commanded the President on the manner of its presentation.

A notice of motion, moved by Jim 2YC, and seconded by 2AVI and 2ABO: "That the Institute has its own Emergency and Transmitting H.Q. situated in Quarry Road, Dural, and its own business H.Q. situated at 14 Atchison Street, Crows Nest, so the Annual General Meeting should discuss the present and future activity and the position on important topics affecting the amateur service." Codicil: The position and activities listed above should be discussed under three headings: (1) Dural H.Q., (2) Atchison Street H.Q., (3) Position of the N.S.W. Division of the Institution, taking into consideration the points raised in headings (1) and (2) above.

The mover of the motion explained his motion and owing to the limited time available on a large agenda agreed that the motion be discussed at a general meeting during the next meeting.

Following an adjournment between 8.55 and 9.15 p.m., during which the general meeting proceeded, the Returning Officer announced the result of the ballot. Members of Council elected for the year 1962-3: H. F. Buttoft, VK3AAH; R. C. Usher, 2CDB; G. C. Williams, VK3Molesworth, VK2VO; A. D. Nuit, VK2DN; M. Pfeffer, VK2MP; K. Squires, VK2SD. Thanks to the Returning Officer and his scrutineers was moved and carried.

Jim 2PM moved a motion of thanks to the returning officer and referred to the great amount of work done and the results achieved during the year. The Annual General Meeting closed at 9.32 p.m.

### GENERAL MEETING

At the general meeting minutes of the previous meetings were read by the Minute Secretary, Max 2MP. A notice of motion, "That all future meetings of the Division be held at headquarters, 14 Atchison Street, Crows Nest" was moved by 2CDB and carried unanimous. New members admitted to the Division numbered 11, six Full Members and five Associate Members.

The balance of the meeting consisted of the discussion of some 40 agenda items which will be discussed at the forthcoming Federal Convention to be held in Sydney in October, and on which the Federal Councillor, Pierce 2AQF, was briefed on the action desired by the Division. The general meeting closed at 12.10 a.m.

### COUNCIL 1962-3

The Council and officers of the N.S.W. Division for the coming year are as follows: President, Vol 2VO; Vice-Presidents: Max 2MP, Harold 2AAH; Councillors: Keith 2BK, Tim 2ZTM, Alan 2DN, Ken 2SD; General Secretary and Treasurer, Bill 2EG.

### DISPLAY—FAIRFIELD

On Monday 10/3/62 the N.S.W. Division presented a lecture and display of "Amateur Radio as a Hobby" to the members of the Fairfield Methodist Church. For nearly three hours the lecturer, who over 200 were introduced to Amateur Radio with lectures, slides and practical demonstrations.

Part of the activities was filmed by A.B.C. Channel 2 News team. The lectures were recorded and will be included in the Tape Service.

### COLLINS DISPLAY AT HEADQUARTERS

An interesting afternoon function was held on March 31 at headquarters when a demonstration of Collins Radio equipment was held, in conjunction with United Radio Distributors Ltd. The audience of over 100 members attended and heard an informative lecture by Mr. White, of Collins Radio Company, who explained the functions of the various types of transmitters and receivers in the range.

Afternoon tea was provided by the ladies committee and refreshments were served. The ladies committee and members present were very impressed with the set up which was operating on the 14 Mc. band, and a number of excellent DX contacts were achieved.

### TAPE SERVICE

Attention is drawn again to the Tape Service which has been continued by the Division under the supervision of the Education Officer, Harold 2AAH. Reference to previous issues of "A.R." or your Bulletin will show the wide range of tapes on diverse subjects which are available to clubs and small groups on application.

These tapes could form the nucleus of your next meeting, as they are all of lectures which have been given before the Division. No

### SILENT KEY

It is with deep regret that we record the passing of:

VK5MD—E. A. ("Doc") Barbier

# \*AEGIS

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	J.12	No. 2. "
455 "Kc.	J.22	Nos. 1, 2 & 3. High select. Designed for communicational research use!
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"	J.9	Nos. 1 & 2. Standard universal. Bandwidth: 7 Kc. at 6 db.
"	J.10	Nos. 1 & 2. Midget universal. Bandwidth: 7 Kc. at 6 db.
"	J.32	Recommended for use in cascaded half-lattice crystal filters.
"	J.33	Nos. 1 & 2. Midget low-gain replacement type.
"	J.39	Bandwidth: 10.5 Kc. at 6 db.
"	J.45	Nos. 1 & 2. Universal. Recommended in double conversion superhets.
1900 Kc.	J.26	No. 3. Recommended for use in a double conversion superhet.
"	J.27	

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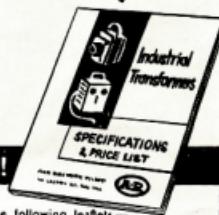
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- TRANSISTOR TRANSFORMERS

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charge is made for this service, excepting the return postage on the tape and slides or drawings which accompany them. DO IT NOW.

#### SILENT KEY

The N.S.W. Division would like to express its sympathy to relatives, friends and the VK5 Division in the loss of one of the long-standing members, Doc Barber, VK5MD, who passed away recently.

#### HUNTER BRANCH

Friday, 9th March, saw the Annual General Meeting and election of officers of the Hunter Branch. At this auspicious meeting we were favoured by a visit of four councillors from the State, namely Bill 2YB, Frank 2ACQ, Tim 2ZTM and Tony 2AWK. Peter Barbier, Kevin 2ZKW and three other visitors whose names I cannot decipher also attended, together with five associates and fourteen full members. This proved to be a jovial bunch as you may well imagine, and the proceedings were most cordial and courteous from time to time.

The retiring President, Stuart 2AYF gave a very full report of the happenings in the Branch during the year. State President, Bill 2XB, was invited to speak at the rostrum for the ceremony of election of officers. For some unknown reason this was called a democratic vote. The fact of the matter is that the whole thing took such a short time that I still do not know what the result was. I do however have thrust into my hand a list bearing the names of the new officers. The only phrase that I can recall from the whole 25 seconds was, "I move that nominations be closed." So there it was and the result was as follows:

President: Stuart 2AYF; Vice-President, Lionel 2CS; Hon. Sec., Gordon 2ZLG; Hon. Treas., Bill 2XT; Social Sec., Sam 2AYL; Social Treas., John 2ZG; Zone Corresp., Keith 2AKX; Liaison Officer to the A.R.C. and T.V. Council, Ian 2IF. Bill 2XB also gave some interesting information on the workings of Council and the Institute in general, and all members gained a great deal of knowledge from the discussion. A special word of thanks was given to Frank 2AF for his excellent organisation of the Morse practice sessions. This met with hearty accord from all present, many of whom are regular listeners to the session. My personal thanks and congratulations to Frank for a job well done.

The Annual General Meeting then closed and the ordinary monthly meeting opened. This, like the election, was a very short lived affair as far as business went, but as soon as the members in attendance had dealt with the usual items Tim 2ZTM and Tony 2AWK came forth with wonderful and mysterious packages and many printed sheets prepared to tell us something of the world above 50 Mc. There followed an interesting session in which two most interesting items of v.h.f. gear, "Display" items were passed around for all to see and the only regret the visitors appeared to have was the magnetic attraction of the Broadcast band for a few moments. Never mind, next time they come they are going to take the crystals out first!

I heard that a telephone conversation the other day to a local v.h.f. man caused some mirth. He, the v.h.f. man, has a son and the reply was, "What's his name?" (v.h.f. set.)

"Never mind, next time they come they are going to take the crystals out first."

Congrats to Jim 2AFT for his mighty score in the VK-ZL Contest; serially apparently won.

A very interesting meeting was held on 40 from Cessnock with Peter 2AYV on the mike and Ian 2AJF is reputed to be on 40 and 80 c.w.

I imagine however that this is a fabrication as I am unable to hear him on my 4W-1. Come along to the next meeting which will be held in the usual place, University College of N.S.W., Tighes Hill, at 8 p.m. on 11th May. On the fourth Wednesday (23rd) you are invited also to the social gathering at Bill Hall's Tavern, Cooks Hill, where you may talk about radio, billiards or whatever subject you choose. See you, 73, 2AKK.

#### THE BLUE MOUNTAINS SECTION

The monthly meeting held at Lawson was the section meeting for the previous year, the results of the following President, Dennis 2VZ; Vice-President, Bob 2ASZ; Treasurer, Norm 2QAA; Publicity, Ron 2ADA; Catering, Sid 2AVK; Construction Committee: 2ASZ, 2ZFB, 2ADF and 2AWW; W.I.A. Rep., Keith 2AEC. Members present were 12, and as a result of the elections for various officers, we, as a small club, had more ballots than the parent body in 10 years; lots of good fun. The club carried a motion to buy two chairs for Atchison H.Q.

This held over until last night, the meeting closed and referred to a film evening with Dennis 2AWW providing the films and Norm 2QAA the projector. Sid 2AVK moved a vote of thanks to Dennis and Norm for an excellent evening.

Sat. afternoon, March 24, the Blue Mts. Civil Defence held an exercise in Glenbrook Park with 2QA, 2MZ, 2ASZ, 2ADA, 2ART, 2AVN providing 2 mx communications. Although we could all see one another, it provided some good fun and as all tx's were on the same frequency it made for some rather quiet times. Dave 2NKX, as C.D. Communications Officer, received from Col. C. A. Strachan a letter of appreciation for the work that had been carried out during the past year. Afternoon tea was served and the goings on were quite all.

Bill 2HZ represented the Section at the opening of Atchison St. and judging by the reports it was an excellent and well attended afternoon. Five members journeyed to Atchison St. on Sat. 25th, for the "Tuna" Ball, Keith 2AKX, Kevin 2ZKW and three other visitors whose names I cannot decipher also attended, together with five associates and fourteen full members. This proved to be a jovial bunch as you may well imagine, and the proceedings were most cordial and courteous from time to time.

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The following members were elected to Council: David 3ADW, Keith 3YQ, Fred 3VS, Alan 3AEI, Dennis 2VZ, Peter 2AVK, Alan 3AJF, Ken 3AJF, Ken 3ACS, Frank 3AYR and Alan 3AEL. The meeting recommended to Council that David Wardlaw be re-appointed as President and F. Ball and A. Elliott as Vice-Presidents.

#### GENERAL MEETING

The Annual General Meeting of the Victorian Division was held in the Radio Theatre, Royal Melbourne Institute of Technology, on Wednesday, 4th April, with an attendance of about 40 members.

The President, David 3ADW, read a detailed report of the activities of the Division during the last twelve months. In moving the adoption of the motion to increase the amount of dividend on the clear and informative report and thanked the office-bearers for their work during the year. George 3AHN supported these remarks in seconding the motion which was carried. The Treasurer, Keith 3YQ, read his balance sheet and answered the questions which were raised.

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#### GENERAL MEETING

The general meeting for April followed the above meeting. The President was in the chair and welcomed the visitors.

The following new members were approved by the meeting: Full Members P. Gleeson, 3ZOL; B. Doherty, 3AVY; G. L. Smith, 3AED; A. McAllister, 3ZNB; J. Warner, 3WA; R. Miller, 3RF; D. Timms, 3AZT; S. Coleston, 3AKX; and as Associate Members, T. Ashfield, G. Lancaster, E. Theodore and L. Phillips.

The main item of the meeting was a discussion of the agenda items which will be considered at the next Federal Convention.

The next meeting will be held on Wednesday, 2nd May.

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It is hoped that in future members will be kept informed of Council activities through the medium of these columns. The April meeting being the first meeting of the new Council, mainly routine matters were dealt with.

On the recommendation of the Annual General Meeting, David Wardlaw, 3AFN, was re-elected President with Fred Ball, 3VS, and Alan Elliott, 3AEL, as Vice-Presidents.

The two new members were found useful enough that Ken 3ACS was appointed Publicity Officer and Frank 3AYR as Joint Instrument Librarian with Michael Osborne.

The Magazine Librarian submitted suggestions to improve the service and Council agreed that these facilities be improved, subject to costs being reasonable. This aspect is being

investigated, and full details should be available next month.

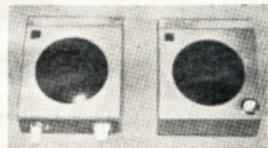
In order to make more use of the instruments a project has been planned, whereby a fully equipped test-bench will be set up in the rooms. Michael and Frank are now working out the details and an early effort on the actual constructional side is anticipated.

W.L.C.E.N. matters will be co-ordinated by 3ADW and 3ZEO with 3OM as h.f. controller and 3ZCB as v.h.f. controller.

#### EASTERN ZONE CONVENTION

The Annual Convention of this Zone was held over the week-end April 7 and 8 at Morwell. It commenced with dinner, then the meeting on the Saturday evening, with the best

## HIGH QUALITY INTERPHONES



(Illustration of Two-Section Interphone)

## VICTORIA

#### ANNUAL GENERAL MEETING

The Annual General Meeting of the Victorian Division was held in the Radio Theatre, Royal Melbourne Institute of Technology, on Wednesday, 4th April, with an attendance of about 40 members.

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#### TWO-SECTION INTERPHONE, Model IP-2

Circuit: Audio freq. amp., 3 transistors. Communication: Press to talk. Speaker: 3½ in. permag. (imp. 8 ohms). Battery: 9v. 216 cell. Size: 102 x 115 x 55 mm. Accessories: Conductor cable 15 m. and dry battery.

Price £13/2/0 (plus 12½% S.T.)

#### THREE-SECTION INTERPHONE, Model IP-3R

Circuit: Audio freq. amp., 3 transistors. Communication: Press to talk. Speaker: 3½ in. permag. (imp. 8 ohms). Battery: 9v. 216 cell. Size: 102 x 115 x 55 mm. Accessories: Conductor cable 20 m. and dry battery.

Price £15/7/6 (plus 12½% S.T.)

#### SEVEN-SECTION INTERPHONE, Model ITK-7

All metal unbreakable cabinet. Transistors: 3 transistors & 1 thermistor. Battery: 9v. (UM-2 L5v. 6v, or Ever-ready 935). Speaker: 3½ in. permag. Size: 102 x 115 x 95 mm. Sub station: 4 x 4 x 2½ in. Accessories: Conductor cable 50 m. and dry batteries.

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roll-up for several years, numberings approx. 30 including visitors: 3SS, 3ZEP, 3ATP, 3HK, 3ZCZ (Melbourne), and 3XN, 3AKN (S.W. Zone), which we trust all had a safe journey.

Peter 3ZDP was elected President. Other officers elected: Bert 3BB, Vice-President; Stan 3ZAB, Hon. Sec.; David 3DY, Emergency Co-ordinator; Cliff 3AIT, official 311 CW call-back station, backed up by Graham 3QZ. Michael 3ZEE, enlisted us very much on Professional matters, and the emergency work done in the recent Dandenong fires. Unfortunately, little zone activity took place over the preceding twelve months, except for several out-of-zone members participating in the F.F.D. and V.H.F. field day. However, this year we hope to change this, and we have arranged several family field days at suitable spots.

On the Sunday we had perfect weather, and had a conducted tour by John 3ZFO over the Gas and Water mainline, and tramped out a beautiful spot called Walker's Park, near Yinnar South, for a barbecue lunch and family gathering, where 71 turned up. The organisers really did a marvellous job, catering for the young, the children and everybody enjoyed the fine cooking, treasure hunts, disposal hand outs, etc., and I sincerely feel that everybody will remember this Convention.

The next Convention is to be held at Warragul on April 6 and 7, 1963, or the nearest convenient weekend.

Our next family field day will be on May 6 at Alf McCrow's place near Woodside, between Yarram and Sale, starting time around 10 a.m. Please, all our members try and attend and I feel quite sure they will enjoy the day immensely. See you there? 72, 3ZCG.

#### NORTH EASTERN ZONE

Approx. 40 members, with families and friends, were at Bendigo on 11 April to attend the first convention held for seven years. The business meeting was held at the Regal Theatre where 3UW was elected as President, 3KR as Vice-President, 3AUL as Sec./Treas., and 3ASY as Correspondent.

The zone hook-up was discussed, rather animatedly and we will continue to hold it

The name of Pee Wee Hunt is familiar to all followers of American Dixieland music, but less familiar is the fact that he can regularly be heard and contacted on the 7 Mc. band using single sideband transmission with the call sign of KIAYA.

on Fridays at 2000 hrs. on 80 mhz; 3AUL was re-selected as co-ordinator, with strict instructions regarding operating procedure in order to ensure that hook-ups do not take too much time.

A decision was made to award a prize next year for the best piece of mobile equipment brought to the Convention, however there must be at least six entries. Commercially built units will be given preference.

Several representatives from Melbourne explained their methods pertaining to Institute buildings and W.I.C.E.N. The latter evoked much interest and we were all set to go into business likewise but were advised to await details of a uniform procedure to be shortly decided upon by the appropriate authorities.

After a pleasant luncheon in the gardens, 3KR once again captained tours of inspection. The new drive-in theatre, Sydney-Melbourne co-ax repeater, and GMV8 were visited. The party broke off at 1700 hrs.

3ASY and 3ACN have been doing much c.w. work (mainly practice) of late; the former however reports juicy contacts with Italy, Alaska, Germany and USA. 3AQZ did start up a month or so back but has apparently gone cold on the mode. Hear tell he has crafty rental embarking on a building scheme with converters, xtal lattice filters, heated dial knobs, etc. For the next two or so years he is going to use R1155.

3AWX making quartz, click filters, shaping networks, etc., and no doubt will be presenting c.w. with 3ASY. SAFF is figuring on trying out klystrons for a change. 3ZKW was successful in the January test and is now awaiting a full call. Unfortunatly he is almost ready to speak to us except for a mod.

That's all for now; this correspondent would appreciate hearing tit-bits of news relating to N.E. Zone members, either direct or otherwise. In the meantime, I will monitor all transmissions with an entirely different filter. Also, Mr. Eddie, keep your fingers crossed for next 10 months as SAUZ predicts a zone shattering event will come to pass. All omens and portents indicate strange goings on.

#### WESTERN ZONE

Bert 3EF, of Warracknabeal, is one of our most active members. His rig consists of a Geloso rx, Geloso v.f.o. driving a single 307 with a pair of 6LG6s as modulators. Antenna is a GCSR, which seems to work extra well on the 3.5, 7, 14 and 21 Mc. bands. Bert works

consistently into Europe, States, Pacific Islands, and has contacted a ZK on the 3.5 Mc. band.

Herb 3NN, of Yannae, and Trev 3ATR are also contacting their share of DX as well as being on the v.h.f. bands. Merv 3AF, of Melbourne, and Vic 3ABE, of Mundaring, are furthering their studies in doing a night school course at the Horsham Technical School. The Birchip boys, Clyde 3ACE and Alan 3ATN, while working some DX, are most active on the v.h.f. frequencies these days. 73, 3AKW.

## QUEENSLAND

Thirty-five members attended the March Divisional meeting at which two sound films were shown by the courtesy of Col 4CI. Some of the night went to a talk by Vince 4VJ on the transistorised g.d.o. published in "QTC" and much appreciated by all. It's a pity more people don't take the effort to offer their little hints and kinks.

Those who have been on the air on Sundays in the 4WI hook-up have noticed the use of a new method of passing the call directly from one to the other without the procedure "Have you found this satisfactory?" Others are waiting to hear what you say. Talking of the hook-up, Harry 4IA will in future be giving monthly conditions predictions for the Amateur bands out of Brisbane.

Again of 4WI, station manager Stan 4SA has been advised to take things easily for a while as he is in the early stages of his retirement. (It's hard to believe, we hear he's a good listener too.) In the meantime, assistant manager Alf 4OL is doing the good work. Les 4EH is another on the not-so-well list, he himself deciding when doctors disagreed.

Here is a note for branches and clubs who may not have heard, or a reminder to those who have, that the 1963 VK4 is now available and you kindly send to Box 638J your regular and special meeting dates, places, times and topics? This for regular publication and distribution to let other members know who is where and when, as well as a reminder to your own group.

The last month has also been the Urunga Convention, and at the time of writing, George 4GG and Bill 4WS intended making the trip. Bill 4WS was busily trying to complete the mobile gear he has been playing around with for ages. Our admiration goes to the boys down under for their enthusiasm and the way in which they had a W.I.C.E.N. operating on the week-end of April 7 and 8 when floodwaters were only starting to rise. Some very fine signals were heard in Brisbane. Very quickly the word spread a net was operating and the frequencies cleared.

#### POISONOUS PARS

Talking of floods, we in VK4 have heard about the drought in VK3 since PanSys called on his fellow members to keep him in deep gratitude for being granted honorary life membership of the Division. Petals must be dropping too at being pressed too strongly under the thumb by his XYL and told not to play with the rough boys up this way. Tut, tut.

## Wireless Institute of Australia

### Victorian Division

## A.O.C.P. CLASS

commences

THURSDAY, 2nd AUG., 1962

Theory is held on Monday evenings, and Morse and Regulations on Thursday evenings from 8 to 10 p.m.

Persons desirous of being enrolled should communicate with—Secretary W.I.A., Victorian Division, P.O. Box 36, East Melbourne (Phone: 41-3555, 10 a.m. to 3 p.m.), or the Class Manager on either of the above evenings.

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100 Ke. and 1000 Ke. Frequency Standard.  
£28/10/0 plus 12½% Sales Tax.

Immediate delivery on all above types.

AUDIO AND ULTRASONIC CRYSTALS—Prices on application.

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ALSO AMATEUR TYPE CRYSTALS—3.5 AND 7 Mc. BAND.

Commercial—0.02% £3/12/6. 0.01% £3/15/6. plus 12½% Sales Tax.  
Amateur—from £3 each plus 12½% Sales Tax.

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With the co-operation of our overseas associates our crystal manufacturing methods are the latest.

Treat him with kid gloves in future, boys of VK4.

The Division's celebrated hard, Howard 4WQ, will by now be holding his chest out with pride. One Sunday night recently on a Brisbane tv. channel, one of his poems was read in the poet's corner section. For who may not know, Howard's poems have been published in two books, one of which he printed and bound in his own home printer, now where his radio gear stands.

Herb 4KNA has been having a little fun with model planes, and has had some success recently. Seems Herb who, incidentally, owns one of those weird electric fence gimmicks, has found he is his own c.m.t. Two fingers across the terminals gave him a reading of 16 micro-amps, and he has just quoted me a steady value of four micro-amps. The laugh came the next morning. First thing out of bed and he gave a steady reading of 10 micro-amps. Herb was last heard propounding some theory about the effect of the sun on the atmosphere.

Jim 4HZ has been heard dashing hither and yon over the vast expanse of south-east Qld. from Rockhampton south. One day he was at the QTH of Frank 4FN. Another week-end he was up with Harry 4MUNDY and they chatted until some unearthly hour of the morning. He certainly gets around that fellow.

Queensland isn't such an out of the way place (quiet PanSy) but there are plenty of foreign correspondents about, so foreign in fact especially does not reach the outside world. Amateurs in this area are a noisy bunch, if you can only offer a few lines of news, do so and your effort will be appreciated. After that outburst, let's see what happens next month. Until then, 73, Don.

#### SOUTH COAST ZONE

Absence from the QTH for a week, a weekend, and several days on odd occasions have not given opportunity of news gathering in this neck of the woods. But there are plenty of foreign correspondents about, so foreign in fact especially does not reach the outside world. Amateurs in this area are a noisy bunch, if you can only offer a few lines of news, do so and your effort will be appreciated. After that outburst, let's see what happens next month. Until then, 73, Don.

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The representative of the landed empire up on the coast Ted 4TX has bobbed up a couple of times in 48 with the Kingfishers. Sorry Tex if you felt neglected, but feel sure you will be able to square with them. 73, 4WS.

#### CAIRNS AREA

Six max activity still continues to be the main interest in this area. The latest to the band was Mickey 4ZJM, who is out at Gordonvale. He is running a converted 322 to a cubical quad which puts out pretty good signal to the north. Last evening he made the trip north to Bob 4TK when we had a break-in from Graham 9DJ, who started his Ham career as 4DJ. He was trying out his new tx using screen mod, which, unfortunately, was not very efficient. Mickey 4ZJM, however, had a 4WDX and a small milliamp 200 miles from the Fly River.

Now a talipiece published somewhere to set you thinking:-

I never have frustrations,  
The reason is, to wit,  
If at first I don't succeed,  
I quit.

73, 4ZW.

#### TOWNSVILLE DISTRICT

My thanks go to Claude 4UX for so ably writing the notes while I was away overseas. I particularly enjoyed the account of how he was vaccinated with a gramophone needle, fully expected the Editor to make overtime use of the blue pencil. But glad to see he so ably kept the space occupied in "A.R."

With the arrival of a visitant up to the home of G3JAF (Art) when I spent a very pleasant weekend, meeting all the Amateurs for miles and miles around. Even going to Ted GSPO for an evening cuppa; the fog did not let me see too far. The new aerial he is using on 60 max. The boys in this area have a club station signing GB3BLV.

Whilst in Hong Kong the boys really turned it on, and as only one night was spent in port, they invited me to a very nice Chinese restaurant. Those present were VS's 4ES, 6DCS, 8CL, 8EK, 6EL, 8EM, together with their wives. A very pleasant time was enjoyed.

In Tokyo the opportunity was taken to visit some of the boys whom I worked on 50 Mc.

JAIDVO did all the necessary spade work in arranging my visits to all, even to the different stations.

Coming home down the Queensland coast our ship made world headlines—"suspected cholera" on board. Thanks to all the Amateurs who worried over my safety. Glad to be back home again.

Things have really heated up while I was away; the tip previously published about the formation of a new club in the north did take place. Thanks to 4UX and the others in the northern clubs it is now to be headed, if not wealthy, start membership well for an increase to the ranks in the Sunshine State by April "A.R." I see over 40 attend classes in the southern part of the State. What has happened to Rockhampton not having classes? Get in to Frank and Hal.

Owing to the practice of back yard chores unable to work the boys during daylight hours. Grass is over 7 ft. high around the fence. That is what the "wet season" does while I am away. Even the white ants have been busy in the shack and partially destroyed the case around the multimeter. They are under control now, literally millions of them poisoned. Bert 4LB heard on s.s.b. just itching to help me get my rig going. No hurry, all those chores to be done are necessary for my peace of mind. A visit to Pauline QSO 4KAH on the Kuranda while he was in port and showed him the sights of the district in daylight, while Bob 4MF did the honors the night before. Sorry I missed VK2AUS/MM while in port but I did manage to find some work him off Cooktown on the Binburra. Enjoyed a QSO with Middy 5ZICD the other afternoon. The local boys will remember his visit last year; he enquired after you all. 73, Bob 4RW.

- - -

#### SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division was held this month to a capacity audience in the clubrooms, and took the form of a buy-and-sell night. John SJC was in the chair for the opening part of the night, and then the business part of the meeting was speed, and after the QSL cards had been distributed by George 5BX, the entertainment commenced.

Now there is not much that can be written about buy-and-sell nights that hasn't already been written many times, but there is no doubt that this type of general meeting always attracts the largest crowds and the crowd present at this meeting was almost a record. So many people in the standing room while premium, and at times it was not quite clear whether or not human beings were up for auction or just radio gear. Just after the bidding had been in progress for a few minutes, the usual unexplained suspense, it was decided to summarize the buy-and-sell night and distribute a batch of crystals that the Division had obtained at a recent dispersals sale.

Gilbert 5GX, who had handled this matter in his usual efficient and methodical style from start to finish, then took over and distributed the crystals to the various buyers. It was the auctioneer for the night, that debonair and athletic type who occasionally gets a mention in these notes, mounted his umbrage and rode off into the corner to sulk in private. Eventually the more popular pieces of equipment had to be led back to the front of the stage and the bidding commenced once again, only to stop at 11 p.m., when not even one solitary valve socket remained for sale.

Now I must confess that the night came to an end, because when I bid a fond farewell to those remaining, after telling them just what they could do with their junk, although nobody took up my challenge, there was a general hand of the morning sortin' money, paying out money embarrassing etc., and for all I know they may be still there yet. However, one fact stands out like organ stops, this buy-and-sell night is without doubt the most successful ever held. As far as I am concerned, it is a success anyway. My natural modesty forbids me to enlarge on the matter to any extent, but when I look back on how many of these nights have been held in the past, and the many hours of work brought into the Divisional coffers then I can only say that the halo which is sprouting on top of Norm Coltham and myself, is fitting like a glove. Saint Norm and Saint Fance they call us!

#### OBITUARY

EDWARD A. ("Doc") BARRIER, VK5MD Members and non-members alike of the VK5 Division together with many members of other W.I.A. Divisions, heard with sadness and regret the news of the passing of Edward A. ("Doc") Barrier, VK5MD, on the night of March 21.

During his long association with the Division he held every executive position possible, was mainly responsible for the reformation of the Division after World War II, spent considerable time and energy on the preparation of the new constitution, together with his elevation, many years ago, to the Divisional Honours. His Membership was a fitting reward for his unstinting service to the Division and Amateur Radio in general.

His position as Keeper of the Adelaide Gramophone whence he operated his station forced him at times to assume a mask of stern and unyielding authority, which was at complete variance to his normal kindly, jocular and understanding nature, and no greater tribute could be paid him than the fact that the prisoners under his control male and female, voluntarily approached the authorities seeking permission to arrange among themselves for the sending of floral tributes to his memory.

His name has been synonymous with Amateur Radio and the Division since he was first licensed in 1932, and his passing will be mourned by all with whom he came in contact.

To his sorrowing wife, May, we extend our sincere and heartfelt sympathy, and can only hope that the hand of time will soften the blow of his passing.

The genial face of Keith 5KH (or SW1) was conspicuous by its absence, but he is at the moment at Warrnambool, and will not be there for a while longer. The SW1 session will be carried on whilst he is away by a man of many parts, John SJC and as Keith expects to be absent from the city of cities like after returning from his months, it looks like John filling in as required.

I very much regret having committed the sin of sins in calling Gilbert 5GX Gil, in these notes a long time ago, because he has never forgiven me, and now that he is on the Council and has their backing, he never lets up. Plain building him up as buy-and-sell and trying to sell his xtals. Cheek!

My savage friend from Norfolk Island, with the ring through his nose and the bones through his ears, Arch 5XK, has been telling of his experiences while DXing around that green island. Judge for yourself, he has been receiving from the W publications he must have spent a fortune, and to cap it all, he expects me to believe that at one of the nearby islands he discovered a new language in which there are no small words. To prove his point, he tells me that "Wendicobucto-steklyctobd," when freely translated means "No." He added that by the time the female members of the sex got round to saying "Wendicobucto-steklyctobd," it was usually late anyway!

Despite all the advice and stories given to me about the paying of my Amateur licence at any local post office, I had no luck again, and had to send my wares way up to the Postmaster, Post Office, Grafton, NSW. There I received a letter sheet (printed sixteen) from Tom STL who is the Postmaster at Remond, and I quote: "I recently came across a new issue of an accounting form introduced for use at money order offices and there is a column provided to cover the acceptance of Amateur license fees." He goes on to say that although he, a postmaster, has always had to pay his license fee at Adelaide he can now accept these payments and cash them to account. Well, I will have to wait for twelve months to put him right or wrong, but until my V5K dices to put him to the test, I would be pleased to hear the result. I mentioned the matter to Ses 5GP who is also the Postmaster-General or something at Narrabeen, but he has not seen any such form. Wouldn't he?

You have probably read of footprints in wet concrete, the burying of historical documents in the foundations of new buildings, etc. etc. Well, along the same lines Frank 5MK of the time when we were erecting the radio (BILL) new tower, placed a penny in the new concrete to the tune of hurrahs and sundry groans, hoots and cheers from the assembled gathering. What you have not read or heard is that when the gathering had departed Luke gently removed



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**MAGNAVON SPEAKERS.** New models, 2V, 2" diam., 12 ohm voice coil, 23/6 each plus tax 25%; 4T, 4 1/4" diam., 15 ohm voice coil, 23/11 each plus tax 25%; 6AS2, 6 1/4" x 4 3/16", 15 ohm voice coil, 22/- each plus tax 25%.

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**DISPLAY TURNTABLES.** 8" model, load 112 lbs., £12 each plus tax 12 1/2%; 12" model, load 175 lbs., £16/13/9 each plus tax 12 1/2%; 12" model with power point, £19/13/9 each plus tax 12 1/2%.

**PHILIPS CRACKED CARBON RESISTORS.** 1 watt, 1/1 each plus tax 25%; 1/2 watt, 8/- doz. plus tax 25%; 1 watt, 1/2 doz. plus tax 25%; 1 1/2 watt, 1/1 each plus tax 25%. All preferred values available.

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**ROTARY INVERTORS.** 32 watts D.C. input, 240 volts A.C. output at 200/250 watts. Unit is supplied complete with voltmeter and voltage controller. Suitable for t.v., £54 each plus tax 12 1/2%.

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**Measures:-**

Collector cut-off current I<sub>CO</sub> 0-50  $\mu$ A.  
Voltage Gain A 0.8 to 0.995.  
Current Gain B 0 to 200.  
Diode Quality Check—Good? Bad.  
Rectifier EP-IP (character):  
EP = 0-5 V.  
IP = 0-500  $\mu$ A.

**Meter Sensitivity:** 50  $\mu$ A., full scale.  
**Scale Calibration:** B, A Ico Good? Bad.  
**Size:** 7" x 4 1/2" x 3 1/2".

**Price:** 10 Gns. plus tax 12 1/2%.

Supplied complete with Instruction Book and Test Leads.

**KEW MULTIMETER, Type TK70B**

**Sensitivity:** D.C. 20,000 ohms/volt.  
A.C. 9,000 ohms/volt.  
**Volts:** A.C./D.C. 0-10, 0-50, 0-250, 0-500, and 0-1,000.

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I notice, with astonishment I was going to say consternation, but I can't spell consternation, that Basil 4ZB from that slightly known hamlet of mine, recently suggested that I was not capable of running down to the post office and renewing my licence. Proudly drawing myself up to my full four foot two inches, I retort that I always pay my licence on the due date, there is no need for me to run down to the P.O., sorry, Receiver of Public Monies.

Tis rumoured that Roy "Buck to you" SDA has joined the ranks of the retired idle rich. No doubt about it, some people have all the luck, fancy living 21 hours a day available for Amateur Radio and nothing else to worry about. What that Buck, speak up?

Bert 5BB heard on the SWL call-back with a signal that had to be heard to be believed. Nothing less than a kw. could compare with it.

John SJC who, as before mentioned, is standing in for Keith on the SWL session, has changed his opinion over night as to the 7 Mc. band. On his first Sunday broadcast, the band was as dead as a doornail. Now, quite suddenly, in his remarks about it. The second broadcast however was right on top and in the call-back he was handling the calls in batches of five at a time and was hungrily looking for more. Just goes to show you.

Lew SAX heard on the call-back proudly telling all and sundry that this was his first time he had contacted SWL for 1962. Unusually for him, he also commented on the high noise level. My, my. Compte SEP also heard on and to again prove that I can read his s.s.b. now without digging at the practice board put out just previously by John 5WL. Don't let him needle you John, to SWK inputs predictions don't mean a thing. Ho, ho. Tom SAQ still relaying the SWL session to the N.T. and D.W. on the air, also commented on the fact that he had not heard from anybody as to whether or not it was serving the purpose for which it was designed. Going on my personal experience, you never will hear anything on the day that you miss out, and then you will hear plenty. Keep up the good work Tom.

Lance SXL not heard much so far this year, but as he is absent from Clare most weeks, this is natural. However he is looking forward to hearing again soon. By the way Lance, I had a letter from a canny Cossins citizen, one 4ZW by the name of Basil, and he wishes me to pass on his 73 to you. I will do this when I say when I work you, but until then do not say where. I am sure his letter of the company you keep, or kept at some time or other! John 5VA heard calling SWL on Sunday morning, but when called into the fold I could not hear him again. Never known him to disappear so quickly, even on the air. Must be the Port Pirie air.

Bill 5XB not heard much so far this year, but as he is absent from Kingston most weeks, this is natural. However he is looking forward to hearing again soon. By the way Lance, I had a letter from a canny Cossins citizen, one 4ZW by the name of Basil, and he wishes me to pass on his 73 to you. I will do this when I say when I work you, but until then do not say where. I am sure his letter of the company you keep, or kept at some time or other! John 5VA heard calling SWL on Sunday morning, but when called into the fold I could not hear him again. Never known him to disappear so quickly, even on the air.

Jack SJS has for some time been complaining of the lack of DX signals and a general falling down of receiving conditions in general. He is maintaining a discreet silence as to the finally found cause, his headphones were stuffed up with paper dated 1925. No, nothing further needed to be said. I would like to know who was his last visitor to his shack! Howard 5XA driving round and round to all his mates, demonstrating his new automobile, with a look of pride on his face which has not been seen for several years. No, not a mobile installed yet, Howard? Associate member John Parkyns, at the moment of writing, is recuperating from a recent operation and still eating his meals off the dining room mantelpiece.

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With remarks tending to the coarse, he refuses to allow me to see his operation. How mean can one get! Brian 5ZBT from Maitland is down in the big city on annual leave. When holidays are finished he will remain a further 14 days for a reacquaintance with the P.M.G. at the training school. Not bad eh?

Bob 5BG, Dave SDS, Len SJN and Luke 5LL heard conducting a marathon QSO on 3.5 Mc. devoted to the past history of paddle steamers on the Murray River. Murray, the last degree of authenticity was behind the discussion. Bob's father was a one-time fireman on a paddle steamer, an uncle of Les was an old river captain, and Luke's maternal grandfather was a river boat captain. Bob was heard next day complaining about a boat he had probably towed from so many river boats up the Murray the night before. Oh dear, oh dear, how funny can I get?

George 5GD heard on 7 Mc. working W stations around. Had me trawled for quite a while just where he was snaring them in, but a quick look at the high end of the band gave the show away. They were up there on s.s.b. in large numbers and looking for V.K.s. George was right, they were, and they would be for V.K.s outside of their s.s.b. segment in the States and this suggestion, whilst coming as a surprise to most of them, certainly appears to have increased the activity between them and V.K.s. Let's bring them up there, they are afraid to call them from over here, they are now listening for calls from the VK segment of 7 Mc.

Talking of George 5GD reminds me that his son, the secretary of the University Amateur Radio Club. The University takes full time at the moment, but when the studies are over he looks like a good prospect for call sign of his own. Talking of the University Amateur Radio Club SUA also reminds me that the students are holding a DX contest on Saturday during the University Orientation Week. They set up their Amateur Station in full view of the passing students and contacted the world with the greatest of ease, as a matter of fact they were contacted me, which according to them was an event on its own. Is that so? Anybody would think I was never on the air. (Are you?) —Editor.

The club also looked through and through its incoming DX cards and asked the University, in the hope that they might obtain the services of some celebrity who would honour their first meeting for the year, by being the guest speaker. After considerable deliberation the qualifications submitted, it was finally decided to ask a South Australian, one who was quite a figure in the community, one who could not be missed even in a huge crowd, and last but not least, one who could be justified in his hobby. When approached to be the guest speaker I was quite overcome with the honour being bestowed upon me, especially as my academic qualifications consisted of having passed through the University on my bicycle one day, no mean feat for the bicyclist.

Although I must admit to having some doubts as to the final outcome of my lecture, especially when in reply to my question as to how long the contest required, I took the President (Ian HK) aside and said "Don't worry, when the tomatoes and eggs start to fly, then you will know your time is up!" However all was well, and as I left the George Murray Lounge by the Woodward with the cheers and acclamations of the crazed members riding in my car, I could not help but feel that I had at last left my mark on the University.

As a gesture of defiance, and also as a sign that my undergraduate days still lingered in my memory, I sailed out of the University "no socks" gate with the greatest of disdain, my bicycle chain in my ear, and some language from the gatekeeper speeding me on my way. To crown my efforts, John SJC rang me the next night and informed me that I was booked for a repeat performance at University on the following Saturday, an early date, and no police protection at that. Oh dear, oh dear, life gets tedious, does it not?

I have commented in these notes many times over the years that one of the hardest jobs included in the duties of the Divisional Sub Editor was the writing of the obituary of the members who have passed on. Writing "Doe's" D.M.D. obituary this month was extremely difficult in view of our personal relationship and also in view of having so much to say about him. He was a man who had a host of members attended the funeral and the floral tributes were an outstanding indication of his position in the public eye. To those members who were close to him and mourn his passing, may I say that his name will live on in the annals of the Division and Amateur Radio for ever.

Well, it would never do to close these notes on such a note of sadness, and in an endeavour to brighten up things a little, I can release

the news that next month's notes will be written, I think, by that dozen of the s.a.b.'s that Beau Brummel of the Backblocks, that wielder of the vitriolic pen, none other than Compte SEP from the hamlet of Gawler. I shall be on my well-earned vacation, fitting either another arrow into my quiver, awaiting with some trepidation to read just what the pangs of jealousy will cause the acting Sub-Editor to write. Remember, dear and gentle reader, sticks and stones may break my bones, etc., etc., but a couple of tut, tut, tut, 73 de 5PS (PanSby to you).

## TASMANIA

The Annual General Meeting and Annual Dinner were again in the past. We were delighted to welcome the following as both functioners: Den 7DK, Bob 7ZAH, Syd 7SP, Max TCA, Ken 7TKH, together with their respective lady companions. These visitors from the north and north-west helped to swell the dinner audience and add to the social and enjoyable function. Our gratitude is due to Snowy TCH and Len 7LE for arranging the details of the dinner, together with several media of enjoyment and entertainment provided.

At the Annual General Meeting, Council for the ensuing year is as follows: Tom 7AL, Terry TIC, Len 7LE, Snowy TCH, Ken 7KA, Alan 7MY, and yours truly (7ZZ). Office-bearers will be elected at the next Council meeting and notifications next month's notes.

The hunt on 11th March resulted 6.5/3/0 towards the south, after our planned club rooms. The attendance at this function was rather disappointing, and the fund-raising committee is very keen to hear of practical ideas how to vary the activities acceptable for this most worthy object. So what about some ideas from you?

Pat 7VG should soon have a modulator and v.f.o. operating, so some phone QRM should soon occur on Tasmania's direction. Cros 7CW and 7AF, after long silence, were both heard on the bands again, and we active licensees hope that this is only a forerunner of increasing activity from both stations. Bert Clarke and Mrs. Clarke have been located at Glenorchy, and are now back in the search, hence the call sign SLU portable VK7 heard regularly on 7 mags. during that time.

Two Contests produced quite a lot of activity during March. The B.E.R.U. Contest resulted in some quite fair results. Ian 7PF and Mc. 7AL with some quite rare DX ZK1AR was exceedingly popular for that reason. The A.R.R.L. c.c. DX Contest was favoured with good conditions for the second week-end of its currency, perhaps due to work 42 States during this week-end alone.

I have again noted frequent examples of phone stations operating in the c.w. section of the various bands. Although the gentlemen's amateur and non-ham operators, yet for ordinary operation, observance of this agreement can only increase our enjoyment of our hobby. How about it chaps? 73, 7ZZ.

## NORTHERN ZONE

The annual meeting of the Northern Zone was held at the home of the retiring President, Mr. Carl Waldon on 8th March, and it is with pleasure that we are able to report that during the year the Zone showed a steady but definite increase in strength, interest and membership.

Welcome additions to our ranks of full members were Ted 7EC and John 7ZF, also Bert Burns and Eric Connor. Both succeeded in obtaining their Limited tickets and are at present waiting to receive their call signs. TBR, late of Wayatinah, is now Postmaster at Evansdale and Harry is also expected to give strength to our ranks.

Officers elected for the following twelve months are John 7ZF, President; Col 7LZ, Vice-President; Den 7DK (ex-5DK), Secretary; Max 7CA, Librarian.

Peter 7PF recently received a letter of thanks from WGSF for his comprehensive report on Oscar and Peter was asked if he would be co-ordinator for this country. Understand a VK6 was also approached. (Perhaps Tasmania is going to be "elevated" to separate country once more.)

Meetings are conducted in different members' homes each month, supper being provided by each member bringing his share of the meal. There is a social gathering and congenial meeting in pleasant surroundings. Unfortunately there are Amateurs in the Zone, some inactive, who do not attend the meetings. To these Amateurs a hearty invitation is extended. Make an effort and come along some time.

Meetings are on the second Friday of each month and a phone call will immediately bring you up-to-date information as to our next meeting place.

The aim of the incoming office-bearers is to make 1962 a bumper year for this Zone and an all-out effort by everyone will help them to achieve their goal.

#### NORTH WEST ZONE

Another month of QRM gone past and there is again little to report. The monthly zone meeting was held first Tuesday in the month and we were pleased to welcome Eric PTPA from the Southern Zone and some back-in-the-corner yarns took place. Leon JWP reported that he has completed and installed another mobile unit for the Burnie Fire Brigade. Now we have Leon and we are grateful for his efforts. We also took the opportunity to say farewell to Harold TMZ who is migrating to the Southern Zone. We wish Harold all success in his new QTH.

At long last it has happened. George TXL has come up on duck talk. And putting out a very nice signal if I am any judge of s.s.b. Even at this QTH at close distance there is no bandspread or splatter which cannot be said of a few others.

Had the pleasure of a visit from those well known Kilmore identities Bert and Peg 3KU on their way to and from the south of VK7. Both appeared to be "Appled up" but in good form.

Apparently the monster, and I refer to the one-eyed variety, has done a great deal to sponsor absenteeism from Ham activities. We note that most of the empty seats at meetings and socials are now occupied by members of the monster. How about a night off occasionally, chapter? If you read this before 1st May boys, bring along a few colour slides for the next meeting. YMXX.

## HAMADS

### Minimum 5/-, for thirty words.

Extra words, 2d. each.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received at F.O. Box 34, GPO, Melbourne, C.S. Vic., by 8th of the month and removed by 1st day of the following month. Call signs are now permitted in Hamads. Dealers' advertisements not accepted in this column.

**FOR SALE:** A.m. and c.w. xmit, band-switched 80 through 10, up to 50 watts input, Geloso v.f.o. with in-built reg. p.s., 807 p.a., pi coupler output, commercial cabinet, meters in p.a. plate and grid, £30. Separate mod. in own cabinet, pr. 807's AB1, plate meter, £17. Will sell complete or separate. Collins 50 watt mod. transformer, pri. 15,000, sec. 7,300, excellent order, £6. W. M. Crawford, Box 142, Kingston, South Aust. VK5XB.

**FOR SALE:** Collins 75A2 Rx and Spkr., mint condition, £175. Tx, 150w, 80-10 mx, 813 final, mod. 830BS Class B, in-built separate power supplies for final, exciter, mod. relay supply etc., in steel cabinet on rubber casters, £75. Tx, 100w., 2-6 mx, final QQE06/40 and 807s, steel cabinet on rubber casters, £25. Rx, 2 mx suit above £7/10. Genemotor Ballantine, U.S.A., mounted-on filter, new condition, 6v. or 12v. input, 500v. 160 mA. o/p., £10. Kingsley S9er and coil boxes, £4/10. Kingsley n.b. f.m. adaptor, £1. Kingsley 6 mx Converter, £4/10. Genemotor and filter, 12v. input, suit 522, £3. Taylor Valve Tester and Multimeter, Model 47A, as new, £25. University Super Tester, £10. C.R.O. power supply, 1900v., £5. A.W.A. Pyron Tape Recorder, £35. VK3NZ, R. Hall, 17 College Grove, Black Rock, Vic. Phone 98-5763.

**FOR SALE:** Converter and Q5er 20 metres, converter consists of A.R.R.L. circuit using 6BX6es with full bandspread and vernier dial, feeds into BC-433G Radio Compass Receiver with built-in a.c. supply, £14. Command

Receivers, 3-6 Mc. and 6-9.1 Mc., in excellent working condition, £5 each. Type C Wavemeter, 1,470 to 10,260 Mc., £5. Signal Strength Meter and Monitor 20 metres, £2/10/0. Antenna matching unit 20 and 40 metres, commercial size, £2/10/0. VK3AES. Phone 28-1264.

**FOR SALE:** Ferguson Transformers, new: three Vibrator Trans. VT106 6/300v. 75 mA., 35/- ea. Two Chokes, CF100 12H/100 mA., 20/- ea. One Driver Trans. 5w. MT106 5,000/125,000 p.p., 35/- One Power Trans. 6/240 pri. sec. 300v. 125 mA., PF119, 45/- One A & R Driver Trans. Type 545, 10w. 4,000/AB2 p.p., new, 50/- One Q+ Transistor P/S 12v., 300v. 100 mA., PS-30/12, as new, £7.5. One Pye VTRM/6 6v. dual P/S, 250v. 100 mA., £31. One 9v. I.F.F. Gene. £1. One 18v. I.F.F. Gene. £1. Three Q+ 85 kc. i.f. Transformers, 30/- set, new, D. V. Scott, VK3DY, 174 Johnson St, Maffra, Vic.

**FOR SALE:** One AR7, excellent condition; one 22 ft. self-supporting tower with extension to 30 or 35 ft.; two 26 ft. masts; one 50 Mc. converter; one 144 converter; want offers within reason. J. N. Bradshaw, 31 Summerhill Road, E. Reservoir, Vic.

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Mc., a.m./f.m., in-built 240v. power supply, 18 valves, £20. Harmonic Generator, A.W.A., 240v., 1 Mc., 100 Kc. and 10 Kc. markers to 30 Mc., £10. R.M.E. Preamplifier, three 6J6s, 40 db. gain, bandswitched all Ham bands, gives great lift, 110v. a.c., instruction manual, £15. R.M.E. Mobile Converter, bandswitched and bandspread all bands, in-built noise limiter, 6 or 12v., output 1600 Kc. to car receiver, £20. Transmitter AT14, 2 to 21 Mc., bandswitched, v.t.o. or crystal, totally enclosed, 21 tubes, 8 meters, input 240v. a.c., converted to plate modulation, perfect high power signal, instruction book, £75. Transmitter AT21, 1.5 to 16 Mc., v.t.o. or crystal, 240v. a.c. power supply, input 120 watts to pair 807s, in-built plate modulators, £25. Petrol generator, 2½ kva., output 12v. d.c. and 240v. a.c., £30. A.W.A. 50 Kc. Filter Q50084, 7 tubes, £12. Trimax modulation transformer TA909B, 150w. audio, multi-match, new, £7. Bendix Frequency Meter, LM10, complete less book, £20. Receiver BC348-R, original, £17. AT21 power supply, complete, £10. A.W.A. 3BZ Receiver, 12v. d.c. 200 Kc. to 30 Mc., £12. 3BZ Transmitter, £4. 5" CRO 12, 3" CRO £9. 2" CRO £8, TS-34 £10. Many other items and parts: Marconi Signal Generator 10-300 Mc., Philips Capacity Meter, Valve Tester, Crystal Calibrators, Triplet Signal Generator, 100 Kc. to 120 Mc., Mobile Transceiver AT2B 12v. dc./240v. a.c., Meters, Receiving Valves, Transmitting Valves, Transceiver 122 perfect, various Transformers, Chokes, A.W.A. Valve Voltmeter, Automatic Call Sign Sender, Variac 8.5 amp. 200-260v., Command Receiver 190 Kc., 1.5 Mc., 3.0 Mc., 6.0 Mc., 9.1 Mc., etc., Command Transmitters, Weston 20,000 p.v.m. Circuit Tester, 522's, Selenium Rectifiers, Selsyn Motors, 240v. and 50v. a.c., Receiver R89AR5, 13" Dural Tube for three element 20 metre Beam, Vibrator Supply 12v. d.c. input 240v. d.c. out, Field Strength Meter 1-95A 100-155 Mc., etc. Dr. Alec Dan, 10 Kulgoa Road, Bellevue Hill, Sydney, N.S.W. FM 1055.

**SELL:** Radio Amateur Call Books. Foreign section Spring-Summer 1961, 15/-; U.S.A. section Spring 1961, 10/-; VK3AWS, 11a Maud St., Ormond, Vic. Phone 58-2149.

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### ALL 6d. EACH

**Metalpal** Electrolytic Type:  
25  $\mu$ F. 25v.d.c.w. 2  $\mu$ F. 150v.d.c.w.  
2  $\mu$ F. 200v.d.c.w. 2  $\mu$ F. 250v.d.c.w.  
and others.

### ALL 6d. EACH

**Electrolytic Chassis Mounting:**  
24  $\mu$ F. 350 peak volts ... 2/- each  
32  $\mu$ F. 200 watts working ... 2/- each  
25  $\mu$ F. 40 peak volts ... 2/- each

### Mica Condensers:

15 pF.	68 pF.	270 pF.
20 pF.	70 pF.	300 pF.
25 pF.	100 pF.	500 pF.
47 pF.	220 pF.	750 pF.
50 pF.	250 pF.	1000 pF.

### ALL 9d. EACH

**Metalpal Pig-Tail:**  
0.022  $\mu$ F. Sprague ... 1/- each  
0.0022  $\mu$ F. Sprague ... 1/- each

## VALVE SOCKETS

Ceramic 4-pin Valve Sockets, 2/- each  
" 5-pin " 2/- each  
" 6-pin " 2/- each  
" 7-pin " 2/- each  
7-pin Miniature " Sockets and Shields. New. 15 for £1.  
9-pin Valve Sockets, McMurdos, 9d. ea.  
Octal Valve Sockets ... 1/6 each

## CO-AXIAL CABLE

100 ohm co-ax. cable,  $\frac{1}{2}$ " diam., 2/- yd.  
98 ohm co-ax. cable,  $\frac{1}{2}$ " diam., in 100 yard rolls £5, or 1/3 yard.  
Twinex co-ax cable, 75 ohm ... 2/- yard  
72 ohm, 3/16" diam., 2/- yard, or 100 yard roll £8/15/0.  
50 ohm co-ax. cable,  $\frac{1}{2}$ " diam., 2/- yard or in 100 yd. rolls £8/15/0.

We have stocks of the latest—  
**LOG BOOKS** 5/6

## COMMAND RX COIL BOXES

190 Kc. to 550 Kc., new, 5/- each

## COMMAND P.A. COILS

For 3-4 Mc. Tx. (Serial No. 7247).

Price 7/6 each

## COMMAND INDUCTORS

Single layer coil (Serial No. 6035).  
For 5.3-7 Mc. and 7.9-1 Mc. Tx.

Price 7/6 each

## SAKURA CIRCUIT TESTER

Model TR-6S

Sensitivity: d.c. 20,000 ohms/volt, a.c. 10,000 ohms/volt. Ranges—d.c. volts: 6, 30, 120, 600, 1,200v.; a.c. volts: 6, 30, 120, 600, 1,200v. D.C. current: 60  $\mu$ A, 6 mA, 60 mA, 600 mA. Resistance: 10K, 100K, 1M, 10M ohms. Capacitance: 0.001-0.2  $\mu$ F. 0.0001-0.01  $\mu$ F. Inductance: 30,000H. Decibels: -20 to +17 db. (0 db. -0.775V ... 600 ohms). Dimensions:  $4\frac{1}{2}$ " x  $6\frac{1}{2}$ " x  $2\frac{1}{2}$ ". Weight: 1.3 lbs. Price £9/10/0 inc. tax.

## FERROCART VACUUM TUBE VOLTMETER

V.T.V.M.	£19/17/6 inc. tax
H.V. Probe	£3/5/0 inc. tax
R.F. Probe	£2/10/0 inc. tax

## ECKO NO. 88 TRANSCEIVER

Portable, xtal locked 4 channel, 40 to 43 Mc., 14 valves, IL4, IT4, 3A4, etc., 12v. 3a. input power supply. Less crystals, mike and headphones, etc.

To Clear. £6/10/0 each

## RECORDING TAPE

TMK "Syncrotape" 7" Rolls, PL-12 (Standard)	£1/16/6
TMK "Syncrotape" 7" Rolls AC-18 (Long Play)	£2/10/6

## V.H.F. RECEIVERS

Type R89/ARN-5A. 300 Mc. Valves: seven 6AJ5s, two 12SN7s, one 12SR7, one 2SD7, six relays, and three crystals of 6522.9 Kc. As new. £5 each.

## MULTIMETER Model 200H

20,000 ohms per v. d.c. 10,000 ohms per v. a.c.

**Specifications:**  
D.C. voltage 0-5, 25,  
50, 100, 500, 1000.  
A.C. voltage 0-10, 50,  
100, 500, 1,000.  
D.C. current: 0-50  
mA; 25, 50, 100.  
Resistance: 0-60K  
ohms; 0-2 meg.  
Capacity: 0.01-0.3  
 $\mu$ F. (at a.c. 3v.).  
0.0001-0.01  $\mu$ F.  
(at a.c. 250v.).  
Doubtful resistance 20  
db. plus 22 db.  
Output range 0-10,  
50, 100, 500, and  
1,000.  
Battery used: UM3  
1.5v. 1 piece.  
Dimensions:  $3\frac{1}{4}$ " x  
 $4\frac{1}{2}$ " x 1-1/8 in.

Complete with internal battery, testing leads and probe.

Price £5/17/6 inc. tax.

## 1155 GENEMOTORS TYPE 34A

Input 9.3v., output 225v. at 110 mA. Complete with relays and filters, in case. Weight 30 lbs. 19/6 each. 5/- handling charge.

## SPECIALS!!

## SPECIALS!!

Pye double bulkhead mounting Chassis Co-ax Connectors ... 2/6 Pye Co-ax Connectors ... 4/- pair English Co-ax Connectors, plug and socket, suit  $\frac{1}{2}$ " cable, 4/- pair. Right angles 4/- each. Crystal Sockets, DC11 ... 2/6 Crystal Sockets, FT243 & miniature 2/9 Jack Boxes, SCR522 type, contains 10K pot and knob. Size  $3\frac{1}{2}$ " x  $1\frac{1}{2}$ " x 2, 3/6 AR8 Cables, 10 ft. long, 8-pin plugs attached ... 10/- High or Low Imp. Headphones, 12/6 pr. Morse Key and Buzzer Sets, new, 12/6 SCR522 28V. Genemotor power supply, 20/-, 5/- packing fee. English Filter Chokes, 40 mA, 100 ohm resistance ... 3/6 each "Scope" Soldering Iron, to clear, 45/-; complete with transformer, £4/10/0. Carbon Microphones ... 12/6 each Carbon Mike Transformers, small, new, 5/- each Vibrators, Oak/M.S.P. 6v. synchronous 7-pin AV5211R ... 1 each Octal Plug and Socket, American type, in metal screw case, 8/6 set

8 Mc. MINIATURE CRYSTALS Band-edge market Miniature Crystal and socket, £2.

TANK WHIP AERIALS 15 feet long. Four sections. 35/- to clear. Personal shoppers only.

## SPEAKER PLUGS

Small bakelite 4-pin and socket, 1/9 pair.

# HAM RADIO SUPPLIERS

5A MELVILLE STREET, HAWTHORN, VICTORIA

Phone 86-6465

Money Orders and Postal Notes payable Nth. Hawthorn P.O. 5/- Packing Charge

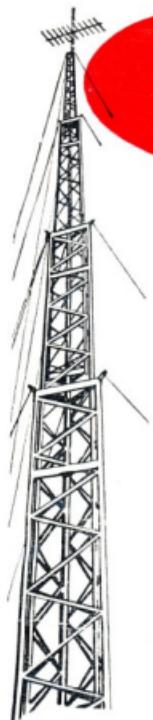
# ANTIFERENCE

## 'WINCHMATIC' TELESCOPIC AND PORTA-TELESCOPIC **TOWERS**

### 'WINCHMATIC' TELESCOPIC TOWERS

Another Antiference product — triangular sectioned telescopic guyed towers for TV and two-way radio installations. These towers are available in heights of 57 ft., 67 ft., 80 ft. and 100 ft. and suitable for erection by two men. The base plate is less than 2 ft. square.

The 'Winchmatic' Telescopic Tower is available in either galvanised or painted finish, fitted with built-in winch for ease of erection and so designed as to allow the aerial to be oriented for direction after the tower is fully extended. No Sales Tax.



### PORTA TOWERS

Also manufactured is a portable model "Porta Tower," to fit on to vehicles (shown below), in heights of 50' and 65'.



AF111/FPC

# ANTIFERENCE (AUSTRALIA) PTY. LTD.

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